NATIONAL CENTER FOR EDUCATION STATISTICS

A Pilot Standard National Course Classification System for Secondary Education

U.S. Department of Education
Office of Educational Research and Improvement NCES 95-480

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Denise Bradby
Karen A. Levesque
Robin R. Henke
MPR Associates, Inc.

Gerald Malitz
National Center for Education Statistics

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U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
Commissioner

National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

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FOREWORD

NCES is pleased to release the 1994 Pilot Standard National Course Classification System for Secondary Education. This publication is the culmination of a major effort to help establish a common terminology, descriptions and coding structure for course information at the secondary level of education.

When this effort began there was no one standard classification system to help maintain, collect, report, and exchange comparable information about the course taking patterns of students. Because interest in this type of information has evolved greatly over time it was essential that an attempt be made to provide a framework for standardization that would reflect current practice.

This national effort was coordinated by MPR Associates, Inc. under contract to the National Center for Education Statistics. Those individuals and organizations involved in the process truly reflect interested stakeholders in secondary education both in the public and private sectors.

NCES has a strong commitment to provide technical assistance and support to the education community to facilitate the collection, reporting, and use of high quality education information. This classification system is one outcome of that commitment. It is but one in a series of related manuals and handbooks that NCES has published in the past and continues to develop in the future.

We hope that you find this publication to be a useful document that will serve you well in many activities.

Paul D. Planchon
Associate Commissioner
Elementary/Secondary Education Statistics Division

Lee M. Hoffman
Chief
General Surveys and Analysis Branch

ACKNOWLEDGMENTS

This document is the result of the work of many individuals from around the country who generously contributed their knowledge, time, and commitment. It has been a collegial effort involving representatives from federal, state, and local education agencies, public and private educational institutions, and national professional associations, as well as educational practitioners and researchers.

Under contract from the National Center for Education Statistics (NCES) staff from MPR Associates, Inc. prepared the manuscript. Denise Bradby provided the leadership for this effort and is the primary author of this document. Other authors include Karen A. Levesque and Robin R. Henke. Carol Miu of the Council of Chief State School Officers provided final review and document preparation.

Several state and local education agencies provided many hours of input and review in the development of this document. These agencies and their representatives are included as Appendix B. Without their help and willingness to spend many long hours of work this effort would not have been possible.

Professional input from NCES staff was essential during the course of the project. While it is impossible to name each and every one of them, contributions from several colleagues have been crucial. Emerson J. Elliott, Commissioner of Education Statistics, who has encouraged inter- and intra-agency collaboration and teamwork to improve the quality of education data, set the stage for this effort. Paul D. Planchon, Associate Commissioner of Education Statistics, provided strong support and guidance for the manual as a project under his authority. Lee M. Hoffman provided technical advice throughout the project's development.

Recognition and appreciation are also extended to the following: Andy Rogers, Los Angeles Unified School District; William J. Brown, Jr., North Carolina Department of Public Instruction; Katy Dowd and John Taylor, National Opinion Research Center; Claire M. Helm, Archdiocese of Washington; Becky J. Hayward, Research Triangle Institute; and, Karen Kuhn, Arkansas Public School Computer Network. These individuals provided extensive in depth review of the manuscript.

Reviewers of the final draft of this publication include Susan Ahmed, Peggy Quinn, Nancy Schantz, and Thomas Snyder of NCES, Thomas Szuba of the Council of Chief State School Officers, and Stephen Hunt of the Office of Educational Research and Improvement.

Table of Contents

List of Tables

Chapter 1

The Classification System: Introduction and Usage Guide

For several years, policymakers, researchers, and educators have felt a growing need for a system that would categorize and classify all the courses taught throughout the nation's elementary and secondary schools. Some desire such a system to use in transcript studies, answering questions such as: What courses do American students take? Does their choice differ by economic condition, by geographic location, or by racial and ethnic characteristics? Related to this interest in the differences and similarities in the education of various types of students is the desire to gather information about the courses offered within the nation's classrooms. Knowing what courses students take would enable education researchers to study the relationship between test scores and coursetaking in the United States and to make broad comparisons between U.S. students' education and that of students in other countries. In addition, this information would also shed light on issues such as: How many of the math courses that schools offer include advanced mathematics concepts? When and what do American students learn about world and national geography? What type of applied activities do students experience in their vocational courses?

More recently, a number of education agencies and organizations have called for the use of technology to maintain data on students and education-related factors. For example, under contract to the National Center for Education Statistics (NCES), the Council of Chief State School Officers (CCSSO) has developed a *Student Data Handbook*. The Handbook contains an extensive and comprehensive description of data element terms, descriptions, and definitions for elementary, secondary, and early childhood level students. Because data collected according to the handbook's classification will be based on common definitions and will be gathered in a similar format, researchers will be able to compare statistics and information across all states as well as aggregated to the national level.[1]

In another NCES project, a consortium of state and local education agencies has developed a system that will enable education agencies to electronically transmit school records of students who move and transfer among school districts and to postsecondary institutions. The project, Standardization of Postsecondary Education Electronic Data Exchange/Exchange of Permanent Records Electronically for Students and Schools (SPEEDE/ExPRESS), provides a mechanism to exchange with other education entities a student's academic progress, special program participation, performance, and other records. One component presently missing from SPEEDE/ExPRESS is a common course system that classifies all academic and vocational courses that elementary and secondary school students take.

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[1] A *Staff Data Handbook* will also be produced by the CCSSO.

Project Purpose

NCES has invested in a multi-year project to develop such a standard national course classification system for elementary and secondary education. Ideally, this system would facilitate communication (electronic and otherwise) between education agencies; enable questions of national, state, and local education interest to be answered in greater detail; and provide a common methodology for researchers performing transcript studies. The intention would be that the system stand apart from, but not replace, states' and districts' existing classification systems.

This report, which includes a proposed classification system and course descriptions based on 11 selected school systems, is the culmination of the first phase of the NCES effort. The pilot project had a number of goals:

- To determine the feasibility of a national course classification system;
- To produce a system for classifying secondary school courses that would be proposed to a larger audience;
- To demonstrate how this system could be used by states to map their secondary education courses into the system, and thus improve comparability with other states through using a single unified classification structure;
- To consider the extent to which data could be appropriately and flexibly used by those with different purposes;
- To identify problems in carrying out a full-fledged classification system; and
- To make recommendations for next steps.

Methodology

There were two general concepts that guided the focus of the study. First, the educational material to be classified and described, as represented by courses within schools, was limited to secondary education. In the states chosen to be project participants, secondary education usually encompassed the 9th through 12th grades. Although a few districts offered high school credit (or dual high school and college credit) for courses taken at a college or through correspondence work, the classification system does not include college and correspondence courses. However, in some states, for example, the Colorado Community College and Occupational Education System, there is an exception to this general exclusion of college-level courses. This is because in Colorado, secondary students enroll in these courses as part of their secondary vocational education.

The second concept during the pilot phase of the project involved the number of states selected to participate in the study. In a previous project undertaken by the CCSSO, state education agencies in all 50 states were asked to send state course lists, course descriptions, coding systems, and textbook lists for their secondary school system. Approximately 35 states responded to the request; however, because this type of state data was frequently not available, several of the respondents substituted the state-level data with information from their largest or most

representative school districts. Information that CCSSO received was inspected and seven states were chosen based on the following criteria to participate in the project:

- Specificity of the course descriptions;
- Size of the student population in states;
- Centralization of curriculum within states;
- Centralization of data collection by states;
- Recent curricular innovation within states; and
- Inclusion of a variety of delivery systems across states.

After reviewing the material obtained from the 35 states, five states were chosen to use for developing a classification system: Maryland, Texas, Colorado, Nevada, and Florida (*base states*). Two additional states were selected to test the proposed system: Virginia and South Dakota (*test states*). The process of state selection and the role each state fulfilled in this course classification is outlined in Appendix B. Appendix B also provides a list of the education agencies who participated in the development of the classification system.

The Role of State Participants in System Development

In the beginning of the project, study staff focused on eight subject areas: the four major academic subject areas (English/language arts, mathematics, science, and social studies); the three vocational subject areas seeming to have the largest enrollments and the widest variety in course or program organization and delivery (business/office occupations, vocational and consumer home economics, and agricultural occupations); and special education. Eventually, additional subject areas were created and classification descriptions were designed to represent all the courses depicted within the course catalogs of the selected school systems. However, both project staff and state personnel initially channeled a significant proportion of their effort into these eight subject areas.

Concentrating on the selected subject areas (English/language arts, mathematics, science, social studies, business/office occupations, agricultural occupations, vocational and home economics, and special education), an initial system was developed that was then reviewed, revised, and altered iteratively throughout the duration of the project. Over a period of 4 months, before each scheduled site visit, personnel in each participating state received descriptions of the project, the classification system, and drafts of the course descriptions for review and assistance.[2] For each base state, site visits to both state and local education agencies served several purposes: to share results of crosswalk activities, to check the accuracy of decisions made by project staff, and to review the proposed classification framework for overall concerns and local anomalies. In several states, local staff filled out course matrices (provided before the site visit). The difficulties encountered and concerns raised while attempting that task provided the material for extensive interviews with local curriculum experts in each subject area. The concerns and difficulties of state

[2]Appendix B provides a detailed list of the state, district, and local education agencies visited.

and local personnel led to modifications, additions, and deletions to the classification system. The site visits provided project staff with an opportunity to receive additional, more detailed information, and after each site visit, they expanded and refined the framework.[3]

Personnel in the test states received slightly different instructions. For example, in Virginia, which has a centralized state course coding system, state personnel received the proposed classification system as developed at that stage, along with a request to develop a crosswalk between Virginia's courses and those described in the system. In South Dakota, because secondary education is fairly decentralized, it was the local school district personnel who received that information and request.

Guidelines Followed During System Development

This process was based on the idea that courses themselves could be singularly described with some amount of specificity. In many cases, this perception held true. However, in attempting to develop a system that: 1) contained course descriptions, yet did not include more than a few hundred courses; and 2) retained some of the practices still used by many school systems (for example, ability-level tracking), some limits were placed on the courses and descriptions. Thus, the classification system does not account for many distinctions that may be important to education personnel, curriculum specialists, education psychologists, or subject matter experts. (Examples of these distinctions may become evident when attempting to place a school's courses into the system.) Even though the course description may be generally appropriate, it may not contain enough detail to capture what makes *Course P* in School ABC different from *Course P* in School XYZ. The difference may be due to the textbooks used or the resources of the school or community. In similar fashion, even though a school district may dictate which textbooks students read and what topics teachers must cover within all *Course P* classes, these guidelines or dictates do not erase all variation. The instructional strategy, the education or experience of the teacher, the use of additional materials, and the dynamics of the students within the classes all create differences between each classroom. Factors that make courses *different*, despite attempts to indicate and specify content, intended level, and some further distinctions, will make descriptions—and therefore comparisons—across states, districts, and schools and even within school buildings imprecise.

Developing this course taxonomy required that a set of broad categories be devised within which course descriptions could be located. These categories were developed based on the various types of subject matter covered within secondary courses and were called *subject areas*. The organizational structures and divisions used by each of the 11 school districts that were studied influenced the number and nature of the devised subject areas. A sense of the overall purpose and topical content of a course, in addition to the divisions used by the school districts, affected the placement of each described course into a subject area category. Because each subject area has its own particular subject fields, intended to provide more detail regarding the courses within that

[3]Where possible and available, information regarding the elementary curriculum was also collected.

subject area, these subject area divisions affect how each course is more thoroughly described. A later section in this report discusses these subject fields in greater detail.

In general, subject area categories that contain academic courses correspond roughly to the academic departments one might see at a conventional high school. There are, however, some exceptions. Journalism and media courses make up the Mass Communication subject area, separate from other English Language and Literature courses. In addition, personal health and safety courses form a separate subject area (as opposed to being part of the physical education or science subject areas). In the proposed taxonomy, the following subject areas (listed alphabetically) contain the vast majority of the academic courses: Elective Activities; English Language and Literature; Fine and Performing Arts; Foreign Language and Literature; Health and Safety Education; Life and Physical Sciences; Mass Communication; Mathematics; Military Science; Multi/Interdisciplinary Studies; Physical Education; Religious Education and Theology; Social Sciences and History; and Special/Exceptional Education.

As with the traditional academic course offerings, the manner in which the studied districts categorized and divided the vocational education offerings affected how the subject areas used for vocational courses were constructed and divided. Nevertheless, it must be acknowledged that dividing occupational and vocational preparation courses into categories is somewhat arbitrary because the vocational education programs administered by states, districts, and schools vary widely in the breadth, depth, and objectives of the courses they offer. These differences in course offerings and vocational program objectives affect the organization of those courses within various education systems. Thus, a school may have an entire Agricultural Science and Technology Division, with several dozen courses creating a variety of program choices, or it may have a single program of Agricultural Occupations, located within a larger Occupational Education Department. Business Education and Office Occupations may be two separate divisions, or may be combined. Technology Education, Industrial Education, Trade and Industrial Education, and Industrial Technology are examples of the divisions created by individual education agencies; however, the placement of particular courses in each of these divisions varied among school districts. Recognizing that some of these divisions are due to the objectives of the vocational course (for example, preparation for entry-level positions versus general education in a vocational subject), subject fields were created to indicate the nature and general purpose of the course. These subject fields are discussed in more detail within the next section.

Structure and Use of the System

The course system contains 632 courses in 29 subject areas. Every course in the system has a title, a description, and a basic course title code. In addition, the system provides a procedure for including more detailed information along with the basic classification title code through the use of seven additional fields. The first four of these additional fields are termed *common fields*. For each course, the common fields have identical definitions and codes, providing the same type of information for every course in the system: an indication of the level of the course, the amount of credit available, and the sequencing of the course. The latter three fields provide additional

information regarding experiences available within the course, the type of credit received, the main emphasis, or additional detail regarding course content. These three fields usually change according to the specific subject area, and are therefore termed *subject fields.*

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

Using the classification system as proposed, a course offered in a school system would be described by a 13-digit numeric code. The course would receive a basic 4-digit classification title code according to whichever classification description fit most closely. The first 2 digits of this classification title code correspond to the subject area; the second 2 digits correspond to a particular course within that subject area. The level of the course can be represented by a 1-digit number; credit by a 3-digit number taken to 2 decimal places; and sequence by two 1-digit numbers (one for term, one for year). The subject fields contain a total of 3 digits. The following sections describe the elements and the coding options of the classification system in greater detail, using a few sample courses from the participating school systems to illustrate how to apply the classification system to actual courses.

Classification Course Title, Description, and Number

Pivotal to the proposed classification system are the course titles and associated descriptions. Every course that purports to convey similar lessons and provide students with the opportunity to achieve similar outcomes has a classification title. The courses offered within individual schools may or may not have the same name as the classification title. The classification system proposes a common name that seeks to communicate the theme of the course. Tied to that classification title is a description developed based on the districts surveyed and studied. The classification descriptions are specific enough to indicate what is being taught, but the intent is to describe, not dictate, what topics and skills teachers may cover within a particular course. Proper application of the classification system depends on the use of the course descriptions, not the classification titles, to identify the appropriate codes for a school system's courses. For example, Life Skills, Self Management, and Personal Development are three courses within the Consumer and Homemaking Education subject area. However, without the associated course descriptions, they might seem to describe the same course. Although these courses do convey related types of information, they are

three distinct courses with different descriptions, and appropriate coding depends upon reading the associated descriptions. Lastly, because one intention of the classification scheme is to provide a system by which school personnel may electronically share certain data, each course title—and linked description—has an associated code number.

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

The first 2 digits of the course classification code field refer to 1 of the 29 subject areas within the classification system; the 3rd and 4th digits correspond to a particular course within the specified subject area. In the above example, *02* identifies this course as belonging to the *Business* subject area; *07* corresponds to the *Accounting* course classification title. Listed below are the classification system subject area codes and corresponding names. Subject area codes were assigned to each subject area based on the alphabetic order of the subject area names. Chapter 2 provides a full listing of course titles and descriptions for each subject area; Appendix A lists the individual course codes and classification titles (without their associated descriptions) in numeric and alphabetic order.

Table 1 — Classification subject area codes and names

Subject area code	Subject area name
01	Agriculture and Renewable Natural Resources
02	Business
03	Computer and Information Sciences
04	Construction Trades
05	Consumer and Homemaking Education
06	Cosmetology
07	Drafting
08	Elective Activities
09	Energy, Power, and Transportation Technologies
10	English Language and Literature
11	Fine and Performing Arts
12	Foreign Language and Literature
13	Graphic and Printing Communication
14	Health and Safety Education
15	Health Care Sciences
16	Industrial/Technology Education
17	Life and Physical Sciences
18	Marketing
19	Mass Communication
20	Mathematics
21	Military Science
22	Multi/Interdisciplinary Studies
23	Physical Education
24	Precision Metalwork
25	Public, Protective, and Social Services
26	Religious Education and Theology
27	Social Sciences and History
28	Special/Exceptional Education
29	Vocational Home Economics

Impact of Academic Integration on Course Design and Description

While developing the classification system, an attempt was made to reflect current trends in education and to accommodate anticipated courses or styles of instruction that would have an impact on course classification. One trend mentioned by personnel at almost every site was academic integration. Overall, academic integration includes at least three types of phenomena: integration within a subject area, integration between or across academic subjects, and integration between academic and vocational subjects. Mathematics and the science disciplines, in particular, are present foci for integration within subject areas, or *vertical integration*. Ideas for new ways of thinking about the connections within the math and science subject areas, as well as new instructional methods, are espoused by the National Science Teachers Association, the American Association for the Advancement of Science, the National Council of Teachers of Mathematics, and several other organizations.[4] Some districts and schools have designed and implemented new courses, while others are still in the formulation stages. This classification system includes classification titles and descriptions for these integrated math and science courses, as well as several other integrated courses that combine two or more subject areas.

Integration has also occurred, albeit slowly, between academic and vocational courses in the attempt to bridge the traditional gap between "abstract and theoretical" academic education and "hands-on" vocational education. Here again, the integration may take a number of different forms. A few education agencies have constructed classes by merging traditional courses. One such course is Food Science, which combines concepts from both science and food service courses. In this course, students learn and practice cooking techniques, but they also gain an understanding of the chemical reactions taking place when bread rises or food spoils. In addition, integration of vocational and academic subjects might occur within individual courses. For example, a teacher may include vocational applications regularly in an academic class, using examples from particular occupations to illustrate an application of the concept or principle being studied. Integration in the opposite direction may also occur, with academic lessons included as an explicit part of vocational courses, wherein the teacher takes a greater amount of time to convey specific mathematical, scientific, or communication concepts related to the vocational content of the course. Related to this latter type of integration, some schools have designed particular courses (separate from the vocational courses but to be taken in conjunction with them) that impart the mathematical, scientific, or language arts concepts and skills specific to and useful for particular occupations or vocations. The classification system supports integrated academic and vocational courses through the creation

[4]See F. James Rutherford and Andrew Ahlgren, *Science for All Americans* (NY: Oxford University Press, 1990); National Council of Teachers of Mathematics, *Curriculum and Evaluation Standards for School Mathematics* (Reston, VA: NCTM, 1989); National Council of Teachers of Mathematics, *Curriculum and Evaluation Standards for School Mathematics: Addenda Series Grades 9-12: Connecting Mathematics* (Reston, VA: NCTM, 1991); and *Curriculum and Evaluation Standards for School Mathematics: Addenda Series Grades 9-12: A Core Curriculum* (Reston, VA: NCTM, 1992).

of course titles and descriptions, as well as integrated experiences through the use of one of the vocational subject fields.

Impact of Differing Vocational Systems on Course Design and Description

States, districts, and schools differ with respect to how they organize their educational offerings, particularly their vocational education programs. Whereas many education systems organize their vocational coursework around an occupation or industry, others organize courses around particular skills. For example, some schools offer a series of courses entitled *Office Occupations 1, 2, and 3* in which students learn a variety of skills associated with working in an business office: word processing, office machinery, recordkeeping, accounting, and so on. Distinctions among courses within the series appear to be distinctions of degree. As students advance through the courses included in the program, their skills and knowledge concerning the range of material within the program expand. In addition, students in the more advanced courses work more independently, have more responsibility for safety, or are expected to create more sophisticated products than those in the beginning courses.

In contrast, other schools offer courses that cover very specific topical areas related to an occupation. These courses differ in kind as well as in level of detail or degree.[5] Again using examples from Business, these schools might offer individual courses entitled Word Processing, Office Machines, Recordkeeping, Accounting, Shorthand, and Business Management. Students choose their courses from these offerings, combining them to create a particular emphasis in the business field. In the former system, a vocational concentration in the business field might be gained by taking all three of the Office Occupations courses; in the latter system, a concentration might be accomplished by completing four credits using any combination of the offerings.

This classification system accommodates this variation by describing both comprehensive courses, which are usually (but not always) taught as a series of courses, as well as specific topical courses. In addition, several of the vocational subject areas provide a course title, number, and general description for courses that treat particular topics, which are not otherwise described in the subject area course offerings, in depth. This additional course title and description enables topic-specific or specialty courses to be associated with their related general subject area (carpentry, electronics, auto mechanics, and so on), but does not provide detailed information concerning course content. For example, the most appropriate course code for Greeley Central High School's *Finish Carpentry* course would be the course code for *Particular Topics in Carpentry*, because Greeley's

[5]Presumably, the variation in the specificity of course topics is also related to local population density. In districts or schools that serve large student populations, economies of scale make affordable the expertise and equipment that are needed for a wider range of vocational education programs than small districts and schools can offer. Thus, it is generally the case that larger districts and schools are able to offer more specific programs of instruction: for example, rather than survey courses that teach some heating, ventilation, air conditioning, and refrigeration, a large district may be able to offer courses in particular aspects of commercial refrigeration.

course concentrates on a specific aspect of carpentry not covered within the other course descriptions.

Common Fields

As mentioned above, the classification's course descriptions convey the general content of the courses being offered. However, this classification system was designed to provide more information and greater detail than was contained in previous taxonomies via the designation of additional "common fields". Some of the additional information indicated under "common fields" is applicable to almost every course: for example, the general level of the course; how much credit schools award to a student upon completing the course; and where the course is located if it is part of a sequence of similar, or consecutive courses represented by the same classification description.

Level

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

Table 2 — Classification codes and meanings for the *level* field

Level field codes	Code meanings
0	Information not collected, unavailable, or missing.
1	Remedial A course offered for the improvement of any particular deficiency, including a deficiency in content previously taught but not learned.
2	Special Education A course that adapts the curriculum, materials, or instruction for students identified as needing special education. This may include instruction for students with any of the following: autism, deaf-blindness, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, serious emotional disturbance, specific learning disability, speech or language impairment, traumatic brain injury, visual impairment, and other health impairments.
3	Basic A course focusing primarily on skills development, including literacy in language, mathematics, life and physical sciences, and social sciences and history.
4	General A course providing instruction (in a given subject matter area) that focuses primarily on general concepts for the appropriate grade level.
5	Honors An advanced level course designed for students who have earned honors status according to educational requirements.
6	Gifted and talented An advanced level course designed primarily for elementary students who have qualified for and enrolled in a school, education institution, or district gifted and talented program.
7	Untracked A course that is not limited to one level of instruction so as to meet the needs of student groups at a variety of educational levels.
8	Limited English/bilingual A course designed for students with a language background other than English, and whose proficiency in English is such that the probability of the individual's success in an English-only environment is below that of a successful peer with an English language background.
9	Accepted as high school equivalent A course offered at an education institution other than a secondary school (such as a junior high school or community college) of through correspondence or satellite media.

Particularly useful for academic courses, but germane to vocational courses as well, the first of the common fields indicates the level of the course, or whether the course is intended for a particular population or type of student. Many schools and school systems throughout the United States place students in, or allow students to choose from, different "tracks" of courses. These tracks may reflect the different levels of commitment, effort, and energy required of the students enrolled; the amount of writing demanded; the level of discourse expected within class discussions; the difficulty of the texts used; and so on. Some schools or school districts have tracks that remain in place throughout several departments; others have tracks only in one or two departments. On the other hand, some schools have made great efforts to abandon their tracking systems, moving toward heterogeneous courses and emphasizing cooperative learning and teaching strategies.

In addition, some schools and school districts offer courses to special populations of students. Commonly, the student must meet some selection criteria to become a member of the particular population. The course content and objectives will still match a classification description, but the designated population, usually by its very nature, will affect the instructional methods or level of the course.

Although the classification system provides options for school personnel to indicate the levels of the courses they offer, the system does not specifically define or even fully describe those options. Level, as a field, provides more information and conveys important distinctions among courses than in previous taxonomies, but this field cannot be concretely described because of the variety of criteria the schools themselves use to categorize courses. Education agencies (whether state, local, or school-based) usually design basic- and honors-level courses relative to the regular-level courses. Instructors typically teach basic courses at a level that enables students who have performed poorly in the past, who might have trouble in a regular-level course, or who need review, extra assistance, or additional time to succeed. Instructors typically teach honors courses on a higher level than regular courses, and typically demand extra effort, more work, and an advanced level of analysis, thought, or performance.

Although the regular curriculum affects the design of the basic- and honors-level courses, the level of the regular curriculum cannot be accurately specified. The objectives of and the expected effort within the courses designated as regular vary from school to school (or district to district). Users of the system must keep this caveat in mind. Similarly, education agencies do not have a uniform definition of academically disadvantaged, the same prerequisites for membership in a gifted and talented program, or identical criteria for identifying limited English speakers. Therefore, the level of these courses may differ somewhat from place to place.

The *level* field, as with all of the classification system's fields, is primarily designed and intended to describe courses. Students who have failed a basic proficiency test may be in a regular or even an honors course. Depending upon a school's bilingual education program, not all students enrolled in a course designated with a "6" need to be limited in their English proficiency.

Credit

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

The second of the common fields indicates the amount of credit available to students upon successful completion of the course, expressed as Carnegie units. A course that meets every day for one period over the entire school year typically offers one Carnegie unit; therefore, this field also serves as a proxy for the amount of time students spend in a particular course. Because the duration of class periods and school years vary, the approximate "seat time" expressed by a Carnegie unit differs slightly among districts and states. However, the unit still provides an important indication of what might be expected from students who have successfully completed the course. Courses with matching course descriptions but carrying varied amounts of credit probably cover different portions of the described course content, or cover course topics in varying levels of detail. In the example above, Accounting 1B offers one-half credit upon successful completion. Schools and school systems using a credit system other than Carnegie units might transform their credits into Carnegie units as they code their courses. Again, a course that meets every day for one period over the entire school year offers one Carnegie unit. If a course meets three times per week for one class period over the school year, it would receive 0.6 Carnegie units of credit (students meet three-fifths the typical amount of time, and so receive three-fifths the amount of credit).[6]

[6]In transforming non-Carnegie unit credit system into Carnegie units, the following formula may be used:
X Carnegie unit(s)=(p*d*w)/y,
where p=# of periods the class meets per day;
d= # of days the class meets per week;
w= # of weeks in the school year; and
y= # of days in the school year.

Table 3 — Classification codes and meanings for the *credit* field

Credit field codes	Code meanings
0.25	One-quarter credit *Typical* amount of credit awarded for a 9-week course meeting 1 hour each school day.
0.50	One-half credit *Typical* amount of credit awarded for a term course lasting 1 semester and meeting 1 hour each school day.
1.00	One full credit *Typical* amount of credit awarded for a year-long course meeting 1 hour each school day.
1.50	One and one-half credit *Typical* amount of credit awarded for a semester-long course meeting 3 hours each school day; this credit amount is most frequently used for vocational courses.
2.00	Two full credits *Typical* amount of credit awarded for a year-long course meeting 2 hours each school day; this credit amount is most frequently used for vocational courses or for integrated courses.
3.00	Three full credits *Typical* amount of credit awarded for a year-long course meeting 3 hours each school day; this credit amount is most frequently used for vocational courses.
9.99	Course does not offer credit upon completion.

NOTE: This list of options is not exhaustive; some school districts offer courses with different credit amounts than those shown above. This list shows the most common credit amounts offered by the participating school districts. Additionally, the length of a course (weeks and school days) can vary greatly among schools.

Another trend discovered during site visits is the rising interest in performance- or competency-based curriculum and education. Educators and administrators across the country are reconsidering how students learn, how curriculum is organized, how schools are presently structured, and how schools might be restructured to facilitate greater achievement. Staff in several of the participating states (Maryland, Virginia, and Colorado, in particular) discussed their states' movement toward a new vision of education, focusing on education that would be "learner centered" and "results oriented." Virginia's written draft of its *Common Core of Learning* offers the following characteristics of outcome-based education:

- What a pupil is to learn is clearly identified;
- Each pupil's progress is based on the pupil's demonstrated achievement of outcomes;
- Each pupil's needs are accommodated through multiple instructional strategies and assessment tools; and
- Each pupil is provided time and assistance to realize her or his potential.[7]

This document identifies the types of people that the state of Virginia expects graduates of the secondary education system to be: healthy, fulfilled individuals; caring, supportive people; collaborative, self-directed learners; reflective, expressive contributors; adaptable, quality producers; informed, involved citizens; and concerned, responsible stewards. In addition, Virginia's document provides 39 "enabling" competencies and associated benchmarks designed to record students' progress toward these goals.

Several other states and districts (project participants as well as non-participants) have formulated vision statements or guidelines outlining the desired outcomes. However, most acknowledge that it will be up to the administrators and teachers in local schools to translate the vision into curriculum, instruction, learning, and student performance. A number of people see the move toward performance-based curriculum as a move away from credit in a course as a measure of student performance and knowledge. For some districts, performance-based learning may translate into a checklist of competencies that a student must acquire, in any manner he or she chooses, before graduation from high school. If, in fact, performance- and competency-based education continues to gain acceptance, the *credit* field as presently envisioned—and perhaps even the entire idea of a classification system using courses as its base—may become deemphasized in some locations.

[7] *The Virginia Common Core of Learning*, Draft, June 23, 1992.

Sequence

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

Table 4a — Classification codes and meanings for the *sequence (Term)* field

Sequence field codes	Code meanings
Term	
0	The course is not part of a multi-term sequence of courses stretching through the year(s).
1	First term in a multi-term sequence of courses.
2	Second term in a multi-term sequence of courses.
3	Third term in a multi-term sequence of courses.
	Codes of 4 and above might also be used, but would be unusual.

Table 4b — Classification codes and meanings for the *sequence (Year)* field

Sequence field codes	Code meanings
Year	
0	The course is not part of a multi-year sequence of courses.
1	First year of a multi-year sequence of courses.
2	Second year of a multi-year sequence of courses.
3	Third year of a multi-year sequence of courses.
4	Fourth year of a multi-year sequence of courses.
5	Fifth year of a multi-year sequence of courses.
	The use of codes greater than "4" is an unusual, but not invalid, choice. This option may be necessary when courses are part of a multi-year sequence of courses that begins before high school. Such sequential offerings may be found within the foreign languages, where the first year of a foreign language may be offered in eighth grade. They may also occur for other courses as well.

The last two of the common fields indicate the sequential nature of the course. The first of the sequence fields denotes term; the second, year. School districts operating on a semester or trimester basis, offering two (or three) consecutive courses fitting one classification description that make up a "complete" course, will frequently use this field. In the Accounting 1B example presented at the beginning of this section, the sequence codes indicate that this course is the second term, first-year course of a multi-year sequence of accounting courses. As another example, *World History A*, offered during the fall term, and *World History B*, offered in the spring and building upon or continuing the lessons of the first term, would be coded "1" and "2," respectively, in the term field. Even those courses that do not necessarily require consecutive terms, but still follow one another—perhaps with one as a prerequisite of the other—would use this field to denote their sequential nature. Similarly, individual courses that are part of a multi-year sequence, such as foreign language or dance courses, would use the second of these two fields to indicate in which year of the sequence the course belongs.

In combination, these two fields enable schools to code their courses as offered at the school, keeping intact the term and year divisions of the courses as taught. This capability is particularly useful for vocational courses when they are sequential and create, in combination, a vocational program. Many schools offer, for example, a program of Auto Mechanics, broken up into a number of courses that offer students progressively more complex, advanced instruction. Yet, the general classification description with the title *Auto Mechanics—Comprehensive* adequately describes all the

courses within the program. Particularly in combination with the credit field, the sequence fields provide a clue as to how much a student might realistically be expected to know.

Subject Fields

In addition to the four common fields and the classification title, the classification system uses three *subject fields* that provide additional information regarding the intended experiences available to students enrolled, the main emphasis of the course, the type of credit received upon successful completion, and detail regarding the content of the course. Subject fields were designed to retain distinctions among courses that fit a single classification description, or to convey pertinent information that was not included in the descriptions. The following sections provide a general overview and examples of the subject fields for both vocational and academic courses.

Vocational Subject Fields

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

The three subject fields for all vocational courses are identically defined and coded. Subject field #1, entitled *Occupational Program*, can indicate whether the course is part of a larger sequence of courses that make up an approved vocational program as well as whether it is part of a tech-prep program. Subject field #2 in the vocational subject areas, *Applied Experience*, denotes the general type of applied experience that students receive during the course. Subject field #3, *Academic Integration*, portrays whether academic integration exists within the vocational course, specifying which of three academic subjects—math, science, communication, or a combination thereof—is explicitly taught within the course or in required "linked" courses. In the above example, the subject field codes of *251* for Accounting 1B identifies it as 1) part of an approved vocational program, 2) a course in which students practice the skills they are learning in on-campus laboratories or via classroom simulation, and 3) a course in which mathematic concepts and skills are explicitly taught within the course. The next three subsections present the options for these three subject fields and explain why they were selected.

Table 5 — Classification codes and meanings for the first vocational subject field: Occupational program

Codes	Code meanings
	(Indicates the programmatic nature of the course.)
0	Information not collected, unavailable, or missing.
1	This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2	This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3	This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Occupational program. Many of the participating education systems have two types of vocational educational offerings. Some courses are part of vocational "programs," intending to lead students who complete these programs into entry-level positions within the specific vocational field. Other courses exist that offer vocational experience and information for students interested in the area, but who have aspirations other than to be employed within that vocational field. These other courses may provide an orientation to a cluster of occupations, or may provide an overview of the vocation, but are not designed to lead to entry-level positions or to additional postsecondary training in that field. The difference between these two types of courses is sometimes obvious, supported by differences in the teachers' training and in the organization of the vocational offerings. In other systems, the difference may be more obscure, or may not exist at all.

In addition, some vocational courses and programs are part of a tech-prep system or of articulation agreements between high schools and postsecondary institutions. The Perkins Act of 1990 authorized funding for planning and demonstration grants that would serve to link secondary and postsecondary education, and included definitions with regard to acceptable tech-prep programs. However, tech-prep and articulation between secondary and postsecondary institutions have existed for many years, and the legislation's definitions may go beyond some programs

currently in existence.[8] No matter the actual definition, the thrust behind most tech-prep programs is clear: secondary schools are cooperating and working with community colleges and other postsecondary institutions (as well as businesses that can provide apprenticeships) in order to smooth a student's transition from a high school vocational program to postsecondary vocational training or to gainful employment.

The articulation agreements recognize, for specified courses, the knowledge gained and the work completed during the students' high school careers. They provide continuity in learning, offer a planned sequence of courses that result in the necessary competencies required for a career or field of endeavor, and reduce duplication of learning experiences. Articulated agreements refer to specific courses or sequences of courses, and keeping track of which courses fulfill such an agreement has become more important. The proposed system will provide an indication of whether a course is part of an articulated tech-prep program. However, as useful as the information may be, the user is cautioned that different definitions of tech-prep programs exist.

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[8]From the Perkins Act, Title III, Part E, Section 347:

"The term 'tech-prep education program' means a combined secondary and postsecondary program which-

(A) leads to an associate degree or 2-year certificate;

(B) provides technical preparation in at least 1 field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health, or business;

(C) builds student competence in mathematics, science, and communications (including through applied academics) through a sequential course of study; and

(D) leads to placement in employment."

Table 6 — Classification codes and meanings for the second vocational subject field: Applied experience

Codes	Code meanings
	(Indicates the nature of the applied experience.)
0	Information not collected, unavailable, or missing.
1	Students are required to work in an independent (public or private) business or organization in this occupation or field.
2	Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3	Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4	Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5	Students practice skills in on-campus laboratories or via classroom simulation.

Applied experience. The type of applied experience that students receive within a vocational course depends upon a number of factors: whether or not the course is part of an occupational program, the type of occupation being studied, the resources of the school, and the level of the course. (One might expect advanced students to have different experiences than students just beginning their coursework.) The classification system proposes a series of options that provide a rough indication of the applied experience that students enrolled in the course will have. Study staff designed the options with a hierarchy in mind; the choice of option 3 does not preclude in-class simulations. However, that choice would indicate that *all* students in the course are *required* to work in a school-supervised business or project. If students can choose to work in the shop, and are encouraged but not required to do so, option 4 should be chosen instead.

This discussion includes one caveat. Because of the course coding systems used by school districts or perhaps the evolution of the courses, schools often offer cooperative education or work experience opportunities in one of two ways. Some schools enroll students in vocational coursework as well as in a separate cooperative or work experience course. Others combine the two into one course. The first two options of the *Applied Experience* subject field are intended predominantly for those vocational courses offered by school systems in which cooperative education is embedded in the coursework. Those schools that offer cooperative or work experience

as a separate course should use the course titles and codes that pertain to cooperative and on-the-job experience; each vocational subject area contains these types of courses. Again, this system describes the nature of each individual course, not the general experience of students who enroll in the course.

Table 7 — Classification codes and meanings for the third vocational subject field: Academic integration

Codes	Code meanings
	(Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)
0	Information not collected, unavailable, or missing.
1	Mathematics
2	Life and Physical Sciences
3	English Language and Literature
4	Mathematics and Life and Physical Sciences
5	Mathematics and English Language and Literature
6	Life and Physical Sciences and English Language and Literature
7	Mathematics, Life and Physical Sciences, and English Language and Literature
8	Separate, required course covering mathematics topics related to occupation
9	Separate, required course covering science topics related to occupation

Academic Integration. As noted throughout this report, subject matter integration has taken on a number of forms, and applies not only within academic courses but also between academic and vocational courses. Instructors may include academic lessons as an explicit part of vocational courses, wherein the teachers take more time to convey specific mathematical, scientific, or communication concepts and strategies related to the vocational content of the course. The Perkins Act of 1990 places an increased emphasis on including academic competencies within vocational courses, an emphasis that may or may not be reflected in the expectations and objectives of individual courses. In addition to schools that embed academic lessons within their vocational courses, some schools have designed particular courses (separate from the vocational courses, but to be taken in conjunction with them) that impart the mathematical, scientific, or language arts concepts and skills specific to and useful for particular occupations or vocations. The third vocational subject field, *Academic Integration*, provides the means for specifying the type of academic competencies that instructors explicitly teach and emphasize within each course.

Academic Subject Fields

Unlike the vocational subject areas, which share three identical subject fields to further describe the courses contained within them, each of the 14 academic subject areas has its own unique set of subject fields. For example, in the three courses presented as examples below, the codes within the subject fields are identical; however, the numbers convey different pieces of information regarding the particular courses, because the subject fields of each subject area have a different definition.

EXAMPLE: U.S. HISTORY – COMPREHENSIVE

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
27	21	2	1.00	0	0	1	2	2

EXAMPLE: DRAMA/STAGECRAFT – COMPREHENSIVE

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
11	12	1	1.00	0	1	1	2	2

EXAMPLE: PHYSICS – FIRST YEAR

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
17	31	3	0.50	1	0	1	2	2

The common codes of the first course presented—U.S. History-Comprehensive—indicates the following characteristics of that course:

Within the Social Sciences and History subject area,	(subject area=27)
it fits the description of the classification title U.S. History—Comprehensive,	(course title=21 within subject area #27)
is taught at a basic level, and	(level=2)
awards one Carnegie unit of credit.	(credit=1.00)

The *122* code in the subject fields further indicates that the course fulfills a primary social studies graduation requirement; requires students to write monthly; and does not require students to use primary source materials frequently. In the Social Sciences and History subject area, the three subject fields correspond to Type of Credit, Frequency of Writing, and Primary Sources (whereas in all the vocational subject areas, the three fields correspond to Occupational Program, Applied Experience, and Academic Integration). This particular sequence of subject fields is unique to the Social Sciences and History subject area. The codes and meanings are provided below.

Table 8 — Classification codes and meanings for the first subject field in Social Sciences and History: Type of credit

Codes	Code meanings
	(If the school, district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Primary Social Studies credit (Often, graduation requirements include specific types of social studies credit, such as World History, U.S. History, Government, Economics, and so on. This option signifies fulfillment of one of these specific social studies credit requirements.)
2	Secondary Social Studies credit (In addition to specific types of social studies credits, several school systems require additional coursework to fulfill graduation requirements. This option signifies fulfillment of one of these general or elective social studies credit requirements.)
3	Fine Arts/Humanities credit
4	Vocational credit
5	Dual credit (in Social Studies and another subject area)
6	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
7	Other type of credit
8	Elective credit

Table 9 — Classification codes and meanings for the second subject field in Social Sciences and History: Frequency of writing

Codes	Code meanings
	(Indicates, on average, how frequently students are required to write in this course.)
0	Information not collected, unavailable, or missing.
1	Less frequently than once per month
2	Approximately once a month
3	About every 2 weeks
4	Weekly
5	Daily

Table 10 — Classification codes and meanings for the third subject field in Social Sciences and History: Primary sources

Codes	Code meanings
	(Indicates whether students work frequently—at least once per month—with primary source materials.)
0	Information not collected, unavailable, or missing.
1	Students work frequently with primary source materials.
2	Students do not work frequently with primary source materials (although some assignments may include using them).

EXAMPLE: DRAMA/STAGECRAFT – COMPREHENSIVE

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
11	12	1	1.00	0	1	1	2	2

The coding of the second course example—Drama/Stagecraft-Comprehensive—indicates the following:

Within the Fine and Performing Arts subject area,	(subject area=11)
it fits the description of the classification title Drama/Stagecraft—Comprehensive,	(course title=12 within subject area #11)
is taught to a heterogeneous mix of students,	(level=1)
awards one Carnegie unit of credit, and	(credit=1.00)
is the first-year course in a multi-year sequence of Drama/Stagecraft courses.	(sequence=01)

The *122* code in the subject fields further indicates that the course fulfills an Arts/Humanities graduation requirement; does not require auditions for entry; and emphasizes public performance. In the Fine and Performing Arts, the three subject fields refer to Type of Credit, Auditions, and Primary Emphasis. As with the Social Sciences and History subject area and fields, this particular sequence of subject fields with their associated meanings is unique to the Fine and Performing Arts subject area. The codes and meanings for the Fine and Performing Arts subject area are provided below.

Table 11 — Classification codes and meanings for the first subject field in Fine and Performing Arts: Type of credit

Codes	Code meanings
	(If the school, state or district requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Fine Arts, Humanities, or Performing Arts credit
2	Physical Education credit
3	Primary English credit (If schools/districts have several types of required English credit, and the course fulfills a Literature/Writing credit, this option should be chosen. This option should also be chosen by schools/districts with only one type of English credit requirement.)
4	Secondary English credit
5	Vocational credit
6	Dual credit (in Social Studies and another subject area)
7	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8	Other type of credit
9	Elective credit

Table 12 — Classification codes and meanings for the second subject field in Fine and Performing Arts: Auditions

Codes	Code meanings
	(Indicates whether auditions are required prior to enrollment in the course.)
0	Information not collected, unavailable, or missing.
1	Auditions are required.
2	Auditions are not required.

Table 13 — Classification codes and meanings for the third subject field in Fine and Performing Arts: Primary emphasis

Codes	Code meanings
	(Indicates the primary emphasis of the course.)
0	Information not collected, unavailable, or missing.
1	Skill, craftsmanship, or technique
2	Public performance/production (Students concentrate on technique, but may be required or strongly encouraged to participate in public performances or displays.)
3	Appreciation and/or evaluation of art form
4	History (and literature, if applicable) of art form(s)
5	Personal expression
6	Working as a group
7	Choreography/Composition
8	Combination
9	Other

EXAMPLE: PHYSICS IA

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
17	31	3	0.50	1	0	1	2	2

One last example should sufficiently illustrate how the different subject areas dictate the meaning of the codes within the subject fields. In the example above—Physics IA—the coding of the common fields denotes the following:

Within the Life and Physical Sciences subject area,	(subject area=17)
it fits the description of the classification title Physics—First Year,	(course title=31 within subject area #17)
is taught at a regular level,	(level=3)
awards one-half Carnegie unit of credit, and	(credit=0.50)
is the first term in a multi-term sequence of Physics courses.	(sequence=10)

The *122* code in the subject fields indicates that a science graduation requirement will be fulfilled upon successful completion; the courses does not require laboratory experimentation; and basic computational skills will be used. The subject field codes and meanings are provided in the following tables.

Table 14 — Classification codes and meanings for the first subject field in Life and Physical Sciences: Type of credit

Codes	Code meanings
	(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Science credit
2	Social Studies credit
3	Fine Arts/Humanities credit
4	Vocational credit
5	Dual credit (in Social Studies and another subject area)
6	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
7	Other type of credit
8	Elective credit

Table 15 — Classification codes and meanings for the second subject field in Life and Physical Sciences: Lab experience

Codes	Code meanings
	(Indicates the participatory, hands-on laboratory experience received by students. If possible, use the higher codes to indicate the frequency of laboratory experimentation.)
0	Information not collected, unavailable, or missing.
1	Regular laboratory experiments are integral to the course.
2	Laboratory experimentation is not required nor integral.
3	Less than 50 percent of the course is spent on laboratory experiments.
4	About 50 percent of the course is spent on laboratory experiments.
5	More than 50 percent of the course is spent on laboratory experiments.

Table 16 — Classification codes and meanings for the third subject field in Life and Physical Sciences: Level of math

Codes	Code meanings
	(Indicates the level of math used within the course.)
0	Information not collected, unavailable, or missing.
1	No math
2	Basic computational skills (addition, subtraction, multiplication, division)
3	Algebraic skills or higher level math

As is evident from the three examples provided above, the specific subject fields for academic courses vary with each subject area. However, the fields generally convey three types of information. These types of information are: the type of credit awarded for the course, or whether the course fulfills a graduation requirement; information regarding course content; and the main emphasis of the course or to the intended student experience. Table 17 presents an overview of the type of information conveyed by the subject fields for each academic subject area. For more specific subject field codes and meanings, turn to the appropriate subject area in Chapter 2. The rest of this section contains a brief discussion of the academic subject fields.

Table 17 — Academic subject areas and type of information conveyed by their subject fields

Subject area	Subject field #1	Subject field #2	Subject field #3
English Language and Literature	Type of Credit	Writing Opportunity	Prose Mastery
Elective Activities	(empty; code as 0)	(empty; code as 0)	(empty; code as 0)
Fine and Performing Arts	Type of Credit	Auditions	Primary Emphasis
Foreign Language and Literature	Type of Credit	(empty; code as 0)	Language Attainment
Health and Safety Education	Graduation Requirement	Human Physiology	Human Sexuality
Life and Physical Sciences	Type of Credit	Lab Experience	Level of Math
Mass Communication	Emphasis/ Type of Credit	Focus	Production
Mathematics	Type of Credit	Scope ofCourse	Calculator/Computer Use
Military Science	Type of Credit	Branch of Service	(empty—code as 0)
Multi/Interdisciplinary Studies	Subject Studied	Subject Studied	Subject Studied
Physical Education	Type of Credit	Health Component	Human Sexuality
Religious Education and Theology	Type of Credit	Doctrine	Community Service
Social Sciences and History	Type of Credit	Frequency of Writing	Primary Sources
Special/Exceptional Education	(blank)	(blank)	Course Target

Type of credit. Several states do not require students to complete certain courses or types of courses before receiving their high school diploma; some states focus their graduation requirements on a few subject areas; and other states have a wide variety of course requirements that students must fulfill. However, because administrators and counselors in several states will use the system as a communication tool to transfer student records within and among school districts, the type of credit awarded upon successful course completion seems an important course characteristic to convey. Presumably, designating a course as one that fulfills a requirement, particularly when other courses offered within the same department do not, signifies that a certain type or level of information is being conveyed within the course. For example, some drama courses offer enough experience in reading literature and in writing compositions to fulfill an English requirement,

whereas other drama courses do not, concentrating more on the performance aspects of the selected scripts.

Even granting that the criteria for graduation credit fulfillment will vary among states (that is, a journalism course meeting the requirements for language arts graduation credit in one state may not fulfill the language arts requirements of another), an understanding that a particular course is designed to provide knowledge deemed as crucial to graduation may affect how other states view that course. Within states where the state agency sets graduation requirements but where local agencies have control over course design, this field may take on greater importance. Students who have completed courses that meet the state's graduation requirements in one district will be able to easily transfer those credits to the receiving district. The subject areas that have one subject field dedicated to information about credit fulfillment are the following: English Language and Literature; Fine and Performing Arts; Foreign Language and Literature; Health and Safety Education; Life and Physical Sciences; Mass Communication; Mathematics; Military Science; and Social Sciences and History. The system was constructed so that if a subject area has a field dedicated to credit fulfillment, it will always be the first subject field. As seen in the previous examples, the options for this subject field change with each subject area. However, as much as possible, codes for this field are as constant as possible across all academic subjects; for six of the subject areas using a Type of Credit field, codes 3 through 9 identify the same type of credit.[9]

Content. Seven subject areas (Health and Safety Education; Mass Communication; Mathematics; Military Science; Multi/Interdisciplinary Studies; Physical Education; and Religious Education and Theology) use one or more subject fields to convey in more detail the specific content area covered in the course.[10] For example, the description of Mass Media—Communication within the Mass Communication subject area reads:

> Mass Media—Communication courses enable students to understand and critically evaluate the role of media in society. Course content typically includes investigation of visual images, printed material, and audio segments as tools of information, entertainment, and propaganda; improvement of presentation and evaluative skills in relation to mass media; recognition of various techniques for delivery of a particular message; and, in some cases, creation of a media product. The course may concentrate on a particular medium.

Although suggestive, the description does not specify what medium the students are examining. This omission is deliberate, because the description focuses on the knowledge students are intended to gain or on the skills they are expected to explore, irrespective of the medium. As a description

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[9]The codes are as follows: 3=Social Studies; 4=Fine Arts/Humanities; 5=Vocational; 6=Dual credit; 7=Student choice; 8=Other type of credit; 9=Elective.

[10]Subject fields that specify content are typically the second subject fields, the first being reserved for type of credit, if necessary. In a few cases, the first or third fields also convey content-related information.

of the course, the medium is secondary to the lessons that are being taught. However, this does not mean that the medium being explored is unimportant; thus, the subject field conveys that information.

Beyond supplying information that some of the descriptions leave out, these content-modifying subject fields also provide an additional measure of flexibility to the classification system. A state-level guideline or framework for the course may contain general lessons to be learned, regardless of form or medium, while local-level blueprints of the course may be more specific. If state-level personnel classify the course, they can choose the "general" option, placing a zero in the proper subject field; on the other hand, if local personnel classify the course, they can indicate the particular medium using the appropriate subject field. Such is the case, particularly, with courses in the Military Science subject area. For instance, states may have a general code for Reserve Officer Training Corps courses because local resources typically determine which branch of the military service serves as the focus, which in turn frequently determines the actual content of the course(s).

Content, as a subject field, is used in a slightly different manner for personal health and safety and physical education courses. Some health courses cover issues such as diet, mental health, and drug abuse prevention in a general fashion, whereas others cover these issues while concentrating to a greater extent on their human growth and physiology ramifications. Therefore, one subject field for health courses indicates whether the course includes the study of human growth and physiology. The other subject field in the Health and Safety Education subject area, repeated as a subject field in the Physical Education subject area, provides an indication of whether or not the course includes a component or unit on human sexuality. Although individual students may have to get a parent's permission to receive instruction during this unit, the field pertains to the course (as does the entire system) and provides an indication of the course objectives. For physical education courses, in addition to the one subject field that indicates inclusion of a sexuality component, another field provides information as to whether the course covers health topics along with the physical education training. Although the course classification system describes a combined Physical Education/Health course, there are undoubtedly some physical education courses that, while not providing equal emphasis on physical education and health education, still contain a health component or unit within the syllabus.

In mathematics, the range of topics covered in each classification course described varies considerably among states, districts, and even schools. For example, as a bridge between general mathematics and algebra, pre-algebra courses cover topics in both areas. Consequently, a pre-algebra course in State A may closely resemble a general mathematics course in State B, while a pre-algebra course in State C may closely resemble an Algebra I course in State A. One subject field in the Mathematics subject area provides an opportunity to indicate whether a course places significant emphasis on "review" topics that might be found in a lower level course or on "enhancement" topics that might be found in the next higher level course. With some exceptions, the mathematics course descriptions include lists of review and enhancement topics.

The Multi/Interdisciplinary subject area also uses subject fields to specify content. As mentioned in a previous section, integration of subject matter is a strategy receiving greater attention nationwide. Although descriptions of several specific courses that integrate two subject areas exist within the course classification system (such as American Literature/History, Integrated Fine Arts, and Food Science), study staff interviewed educators who knew of or envisioned courses that integrated several disciplines. In these courses, students might approach a topic such as the environment or modern social problems, or a problem suggested by the students themselves from the perspective of various disciplines. However, the content of these courses may change frequently according to current events and students' interests. One can imagine interdisciplinary courses being offered on the Gulf War (bringing together history, political systems, communication and the media, and technology); on the presidential elections (combining geography, economics, mathematics, politics and political systems, and communication techniques); on the contributions of immigrants (drawing from language arts, science, history and the arts); and on a variety of other topics limited only by imagination and available resources (including time, energy, and expertise). The Multi/Interdisciplinary subject area offers models to describe the types of courses that schools may implement, and then uses the subject fields to indicate the three main disciplines from which the course draws its lessons and principles.

Focus/Emphasis. The last type of information conveyed by the various academic subject fields concerns the emphasis of the course or the intended experiences of those enrolled. Even more so than the content-related subject fields, these fields are quite subject specific. Two fields within the English Language and Literature, Life and Physical Sciences, and Social Sciences and History subject areas are dedicated to the intended experiences of the student. For the English Language and Literature and Social Sciences and History subject areas, one field indicates how often, on average, the instructors require students to write. In the English Language and Literature subject area, the other field indicates what level or kind of prose students are working to master, with the five available options ranging from "word recognition, comprehension, and usage" to "documented research papers and/or long critical analyses." For the Social Sciences and History subject area, the other subject field notes whether or not students frequently use primary sources. As presented earlier in this report, the Life and Physical Sciences subject area also has two subject fields dedicated to student experience. One field provides an indication of the emphasis given to hands-on laboratory experiments; the other indicates the level of math used in the coursework.

Four more subject areas contain subject fields conveying information regarding emphasis or intended experience. The third Mathematics subject field (after type of credit and a content-modifying field) indicates whether the course objectives place a strong emphasis on using a calculator or computer throughout the course. Secondly, subject field #3 in the Mass Communication subject area notes whether a product (or membership on a production staff) is required, encouraged, or not required. A subject field found in the Fine and Performing Arts subject area indicates whether enrollment in the course requires auditions. Lastly, the third subject field in the Religious Education and Theology subject area indicates whether the course requirements include community service.

State and Local Coding

This classification system is proposed as a framework that can be used to describe all secondary courses in the nation. How it is used and how specifically the courses will be described depends upon the users, the applications for which it is adopted, and how much information is available to those who apply the codes to the courses. Some users have no need for the level of detail that would be transmitted when using every field, whereas other users may find that information of vital importance.

Whether or not all fields are used will also depend upon the amount of information available to the personnel coding a school's or school district's courses. The information required to select appropriate codes for the subject area fields, course title fields, and common fields are likely to be available from course catalogs. Depending upon the specificity within catalogs, some of the subject fields (the last three fields) may also be coded using the catalog descriptions. However, some of the subject fields require a deeper familiarity and understanding of the curriculum.

As stated at the outset of this manual, this system is intended to facilitate communication between schools, education agencies, enable questions of educational interest to be addressed in greater detail, and to provide a common methodology for researchers performing transcript studies. It is not intended to replace existing systems at the state or local level, only to provide the framework for a common terminology to assist in the communication process. It is hoped that education agencies will set up crosswalk tables, matching their present courses and coding systems to the courses and codes presented in this publication. In this manner, reports to the state, or the transmission of transcripts to other schools, districts and to postsecondary institutions will be able to take advantage of common terminology and understanding.

Chapter 2

Subject Fields and Course Descriptions

As mentioned in Chapter 1, this course classification system contains 632 secondary education courses in 29 subject areas. Associated with each subject area is a trio of subject fields that further describe the courses assembled within the subject. Each course has a basic course code, classification title, and description. This chapter presents, for each of the 29 subject areas, the trio of subject fields—with their associated codes and meanings—and the course codes, titles, and descriptions for each course placed within the subject area.

The basic course code consists of a 4-digit number, with the first 2 digits corresponding to the subject area to which that course belongs. These 2 digits provide the user with a logical link to the subject fields that are used to further describe the course. An alphabetic ordering by subject is used in assigning the subject area codes (e.g., Agriculture and Renewable Natural Resources=01, Business=02, Computer and Information Sciences=03).

The last 2 digits of the basic course code correspond to the order of the courses as described within the subject area. Although rigorous procedures are not used to order courses within the subject areas, courses are grouped according to topics or skills covered within the courses. For example, within the Energy, Power, and Transportation Technologies subject area, courses are loosely grouped (and then coded) according to coverage of mechanics, aircraft mechanics and construction, detailing and reconditioning, repair and refinishing, operation, general energy and power, and special courses (discussed below). Each successive group's code begins with a new number in the 3rd-digit place.

As another example, in the English Language and Literature subject area, courses are loosely grouped into general language arts, literature and composition, writing, reading, combination, morphology, English as a second language, communications, and public speaking courses. Where possible, this procedure of grouping similar courses within a subject area and coding is followed. Occasionally, because of the large number of courses covering a particular subtopic or a large number of subtopics, this method cannot be followed; thus, differences in the 3rd digit have no real meaning. For example, courses concerning the various social sciences within the Social Science and History subject area are not divided according to the particular science. Courses coded from 2770 through 2786 cover many different types of social science, including sociology, anthropology, psychology, and others. In sum, although courses are informally grouped before codes are assigned, these groupings are flexible. Appendix A may clarify these groupings within each subject area.

Some numbers are used consistently to denote certain characteristics of the courses. For the vocational courses, a course code ending with "1" typically signifies an exploratory or introductory course; a course code ending with "2" usually denotes a comprehensive or general course. In order

to retain these meanings of 1 and 2 when used as the last digits of vocational course codes, groupings within the vocational subject areas generally begin with "xxx3," unless there are introductory or comprehensive courses in the group. (There are a small number of exceptions.)

Lastly, course codes in the upper 90s range are reserved for special types of courses. With the xx in the following list representing the Subject Area number, a code of

xx95	corresponds to	Subject Area—Related Subjects;
xx96	corresponds to	Subject Area—Independent Study;
xx97	corresponds to	Subject Area—OJT;
xx98	corresponds to	Subject Area—Co-op; and
xx99	corresponds to	Subject Area—Other.

Codes (and descriptions) for OJT and Co-op courses are included in each vocational subject area with the exception of Consumer and Homemaking Education. Where applicable, Related Subject and Independent Study courses have also been included in vocational subject areas; academic subject areas typically contain Independent Study courses. All subject areas, whether vocational or academic, have the xx99 code reserved for courses that a school system offers that are not adequately described by any of the classification system's course descriptions.

Agriculture and Renewable Natural Resources (01)
subject fields and course descriptions

This subject area encompasses courses that concern the use of land and natural resources, including plant and animal production and processing, resource conservation and management, and horticulture.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0101 Introduction to Agriculture

Introduction to Agriculture courses survey a wide array of topics within the agricultural industry, exposing students to the many and varied types of agriculture and livestock career opportunities and to those in related fields. As the name implies, these courses serve simply to introduce the agricultural field, providing students the opportunity to identify a focus for continued study or to determine that their interest lies elsewhere.

0102 Agriculture—Comprehensive

Agriculture—Comprehensive courses are usually multi-year sequential courses that cover a wide range of agricultural topics, including plant and animal science, production, and processing; agricultural mechanics, including tool and machine operation and repair; construction and repair of farm structures; business operations and management; and the careers available in the agricultural industry. More advanced courses may include topics such as chemical and soil science, ecology, agricultural marketing, and veterinary science. Participation in the Future Farmers of America (FFA) is often a requirement.

0103 Agriculture Mechanics/Equipment/Structures

Agricultural Mechanics/Equipment/Structures courses provide the skills and knowledge specifically applicable to the tools and equipment used in the agricultural industry. In learning to apply basic industrial knowledge and skills (engines, power, welding, and carpentry, among others), a broad range of topics may be explored, including the operation, mechanics, and care of farm tools and machines; the construction and repair of structures integral to farm operations; an introduction or review of electricity and power; and safety procedures.

0104 Animal Production/Science

Animal Production/Science courses impart information about the care and management of domestic and farm animals. Animals' nutrition, health, reproduction, facilities, product processing, and marketing are all possible topics covered in these courses. Students may study a particular species (swine, cattle, horses, fowl, sheep, and so on), or may learn how to care for and maintain livestock as a more inclusive study.

0105 Plant Production/Science

Plant Production/Science courses provide knowledge about the propagation of plants for food and fiber. Soil science, irrigation, pest and weed control, food and fiber processing, and farm operations are possible topics covered within these courses. Plant Production courses may cover knowledge and skills generalizable to all crops, or may emphasize a particular area of the agricultural industry.

0106 Agricultural Production

Agricultural Production courses combine content related to animal and plant production, providing comprehensive coverage of the production functions of the agricultural industry. Care and management of farm animals, crop production and harvest, plant and animal insect and disease control, efficient resource management, and management of the farm are typical topics covered in Agricultural Production courses.

0107 Agricultural Management

Agricultural Management courses provide students with the information and skills necessary for career success in agribusiness and in the operation of entrepreneurial ventures in the agricultural industry. Management courses may cover topics such as economic principles, budgeting, risk management, finance, business law, marketing and promotion strategies, insurance, and resource management. Other possible topics include development of a business plan, employee/employer relations, problem solving and decision making, using computers in agribusiness, and building leadership skills. A survey of the careers within the agricultural industry might also be incorporated into these courses.

0108 General Horticulture

Designed for students interested in the art and science of growing plants, shrubs, trees, flowers, fruits, and vegetables. General Horticulture courses cover a wide variety of topics, including greenhouse and nursery operations, orchard management, vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed and pest control, and floral design. As they progress through a series of courses, students increase their knowledge and skills in horticulture and will usually be offered the opportunity for applied training.

0109 Ornamental Horticulture

Similar to General Horticulture, Ornamental Horticulture courses provide information regarding the care and propagation of plants, flowers, trees and shrubs, but place a special emphasis on those used for decorative and aesthetic purposes. Because of this particular emphasis, Ornamental Horticulture courses may have a major focus on nurseries and greenhouses and on the floristry industry.

0113 Wildlife Management

Often with an emphasis on conservation of natural resources and frequently including outdoor recreation topics, Wildlife Management courses provide the opportunity to understand and appreciate the importance of maintaining the land and ecological systems that enable non-domesticated animals to thrive. Wildlife Management courses emphasize how humans and animals may both take advantage of the same land, or how to gain economic benefits from the land while not degrading its natural resources or depleting the plant or animal populations.

0114 Forestry

Forestry courses provide the information and experience necessary for the cultivation and care of forests or timberlands. Usually geared for students who are interested in careers in the forestry service or in the timber industry, Forestry courses cover topics such as the processes of regeneration and reforestation, conservation of natural resources, erosion control, trail development and maintenance, mapping and surveying, operation of forestry tools, government regulations, and recreational use of forests.

0115 Natural Resources Management

Natural Resources Management courses combine the fields of ecology and conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources, specific topics and uses may be covered, such as hunting or fishing preserves, forest production and management, wildlife preservation, and human outdoor recreation.

0123 Animal Processing

Animal Processing courses impart the knowledge and skills needed to bring animal products to market. Although these courses may include an overview of animal care and maintenance, the focus typically remains on quality selection, product preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Animal Processing courses may impart an overview of several types of animal products, or may specialize in particular products, such as meat, leather, wool, dairy products, and so on.

0124 Agricultural Processing

Agricultural Processing courses impart the knowledge and skills needed to bring animal and plant products to market. Processing courses may cover a wide variety of topics, including care and maintenance of animals or plants, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Agricultural Processing courses may impart an overview of product processing or may specialize in particular products.

0195 Agriculture—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in agricultural occupations; such topics may include mathematics, science, mechanics, and so on.

0197 Agriculture—OJT

Through Agriculture—OJT courses, work experience is gained within the agricultural field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Agriculture—OJT experience.

0198 Agriculture—Co-op

Agriculture—Co-op courses provide work experience in the agricultural field and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0199 Agriculture—Other

Business (02)
subject fields and course descriptions

This subject area encompasses courses that concern knowledge and skills useful in business, secretarial, and office occupations, including general office procedures, use of office machinery, business management, and financial operations.

Subject Fields

Occupational Program

(Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.

1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.

2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.

3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience

(Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.

1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.

2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.

3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).

4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.

5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0201 Business/Office Career Exploration

Geared for students with a possible interest in business or office occupations, Business/Office Career Exploration courses expose students to the opportunities available in the accounting, administration, data processing, management, and secretarial fields. Emphasis is placed on responsibilities, qualifications, work environment, rewards, and career paths. These courses may also include consumer education topics, keyboard exposure, and/or hands-on experience within the various occupational areas.

0202 Office Procedures—Comprehensive

Office Procedures—Comprehensive courses provide numerous opportunities to explore and understand the responsibilities and duties common to most office personnel. These comprehensive courses cover such topics as communication skills, reception and transmission of information via data processing equipment, filing and record management, mail handling, scheduling meetings and conferences, creating itineraries, and word processing.

0203 Office Services

Office Services courses introduce and refine basic clerical and receptionist skills. Course content typically covers filing, telephone, and keyboarding skills; reprographic machinery and procedures; communications skills; and so on.

0204 Keyboarding

Keyboarding courses provide an introduction to the keyboard (letters, numbers, and symbols), basic machine operation, and proper typing technique. As students progress through the course and into advanced courses, they improve their speed and accuracy. Initial courses typically focus on producing business letters and reports that incorporate column typing. Advanced courses continue to emphasize developing speed and accuracy in producing a variety of increasingly complex business documents. Such courses develop proficiency, production skills, and problem solving skills. Keyboarding skills may be developed on typewriters or computers.

0205 Word Processing

Word Processing courses introduce automated document production using one or more software packages. These courses may introduce keyboarding techniques or may require prior experience; in either case, speed and accuracy are emphasized. A parallel focus is placed on the use of software commands and functions to create, edit, format, and manipulate documents, capitalizing on the power offered by word processing software programs. File and disk management and other computer-related skills may also be covered in Word Processing courses.

0206 Recordkeeping

Recordkeeping classes provide a basic understanding of the procedures involved in recording personal financial transactions as well as transactions typically undertaken by small businesses. Partial emphasis may be placed on personal banking, budgeting, and income tax calculations; additional emphasis is usually placed on cashier and clerk procedures, inventory control for small businesses, database management, merchandising, and payroll. Recordkeeping courses teach students the value of recordkeeping to the organization, operation, and control of a business.

0207 Accounting

Accounting courses introduce and then expand upon the fundamental accounting procedures used in small businesses. Typically, the first year covers the full accounting cycle, and incorporates topics such as payroll, taxes, debts, depreciation, ledger and journal techniques, and periodic adjustments. Students may learn how to apply standard auditing principles to the projects they work on and may prepare budgets and final reports. Calculators, electronic spreadsheets, or other automated tools may be used. In advanced courses, elementary principles of partnership and corporate accounting are introduced and explored, as are the managerial uses of control systems and the accounting process.

0208 Notetaking

Notetaking courses (which may also be called speedwriting) are designed to help students take more useful notes on their reading and during lectures and class discussions. Although a notetaking course may be helpful in office situations because a shorthand system is often developed, these courses are not typically intended for students who are interested in the secretarial field, but rather for those who desire to improve their notetaking skills. Vocabulary, spelling, and punctuation review may be part of this course.

0209 Shorthand

Shorthand courses provide the theory and fundamental techniques for dictation and transcription. Speed, accuracy, and efficiency in dictation, vocal interpretation from shorthand notes, and transcription of notes to a typewritten (or word-processed) document is emphasized. Shorthand courses are typically designed for students who desire to enter the secretarial field.

0210 Office Machines

Courses in Office Machines introduce the various types and models of office machines common to most business offices, and enable students to refine their skills using these machines. Typically, the business machinery includes calculators and adding machines, phone systems, copy and facsimile machines, and so on.

0221 Introductory Business

Introductory Business courses survey an array of topics and concepts related to the field of business. These courses introduce business concepts such as banking and finance; the role of government in business, consumerism, credit, investment, and management; and may provide a brief overview of the American economic system and corporate organization. In addition, Introductory Business courses may expose students to the varied opportunities in secretarial, accounting, management, and related fields.

0223 Business Management

Business Management courses acquaint students with management opportunities and effective human relations. These courses may provide students with the skills to perform planning, staffing, financing, and controlling functions within a business. In addition, they may provide a macro-level study of the business world, including business structure and finance, and the interconnections between industry, government, and the global economy.

0224 Entrepreneurship

Entrepreneurship courses acquaint students with the knowledge and skills necessary to own and operate their own businesses. Topics from several fields typically form the course content: economics, marketing principles, human relations and psychology, business and labor law, legal rights and responsibilities of ownership, business and financial planning, finance and accounting, and communication. Several topics surveyed in Business Management courses may also be included.

0225 Banking and Finance

Banking and Finance courses provide students with an overview of the American monetary and banking system, types of financial institutions, and the services and products they offer. Course content may include government regulations; checking, savings, and money market accounts; loans; investments; and negotiable instruments. As the courses provide information about career opportunities, students may practice the varying responsibilities of personnel within the banking and finance industries.

0296 Business—Independent Study

Business—Independent Study courses, often conducted with instructors as mentors, enable students to explore business-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to explore a topic of special interest applicable to the field of business or to further develop a specific skill.

0297 Business—OJT

Through Business—OJT courses, work experience is gained within the business field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Business—OJT experience.

0298 Business—Co-op

Business—Co-op courses provide work experience in the business field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0299 Business—Other

Note:
Other Business-related courses may be found in the following subject areas:

Computer and Information Sciences (Business Computer Applications)
English Language and Literature (Business/Applied English)
Mathematics (Business Math—General Math level, Business Math—Algebra I level, and Business Math—Algebra II level)

Computer and Information Sciences (03)
subject fields and course descriptions

This subject area encompasses courses that concern computer technology; computer programming; and the electronic manipulation, processing, and transmission of data.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.

1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.

2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.

3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.

1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.

2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.

3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).

4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.

5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0301 Basic Computer

Basic Computer courses introduce the computer and peripheral devices, the functions and uses of computers, the language of the computer industry, possible applications, and occupations related to computer hardware and software. Legal and ethical issues may be explored, as well as the effect of the computer on modern society. Performance of some computer operations may be required.

0302 General Computer Applications

Designed for students with an interest in exploring the uses of the personal computer, General Computer Applications courses provide experience in the proper use of previously written software packages. A wide range of applications are explored, including (but not limited to) word processing, spreadsheet, graphics, and database programs. Electronic mail and desktop publishing may also be included. Exercises and problems may be from any field, or may be defined by the student(s).

0303 Business Computer Applications

Designed for students with an interest in business/office occupations, Business Computer Applications courses provide experience in the proper use of previously written software packages. Generally, a wide range of applications are explored, including (but not limited to) word processing, spreadsheet, graphics, and database programs. More advanced topics (such as electronic mail, desktop publishing, and telecommunications) may also be included. Exercises and problems are specifically business related.

0313 Business Programming

Business Programming courses provide students with experience in using previously written software packages as well as designing and writing programs of their own. With a focus on business application, the word processing, spreadsheet, graphics, and database exercises contain a business industry focus, and the original programs are written in languages typical of the business industry (BASIC, COBOL, and/or RPL).

0314 Data Systems/Processing

Data Systems/Processing courses introduce students to the uses and operation of computer hardware and software and to the programming languages used in business applications. Students typically use BASIC, COBOL, and/or RPL languages as they write flowcharts or computer programs. Data processing skills may also be a component of Data Systems/Processing courses.

0315 Computer Graphics

Computer Graphics courses provide students with the opportunity to explore the capability of the computer to produce visual imagery and to apply graphic techniques to various fields, such as advertising, TV/video, and architecture. Modeling, simulation, animation, and image retouching are possible course topics.

0316 Computing Systems

Computing Systems courses offer a broad exploration of the use of computers in a variety of fields. Course content may have a considerable range, but typically includes the introduction of robotics and control systems, computer-assisted design, computer-aided manufacturing systems, and other computer technologies as they relate to industry applications.

0317 Computer Technology

Computer Technology courses introduce students to the features, functions, and design of computer hardware, and provide instruction in the maintenance and repair of computer components and peripheral devices.

0318 Network Technology

Network Technology courses introduce students to the technology involved in the transmission of data between and among computers through data lines, telephone lines, or other transmission media (such as hard wiring, cable television networks, radio waves, and so on). The course may emphasize the capabilities of networks, network technology itself, or both. Content topics emphasizing network capabilities include electronic mail, public networks and electronic bulletin boards; topics emphasizing the technology include network software, hardware, and peripherals involved in setting up and maintaining a computer network.

0323 Computer Science/Programming

Computer Science/Programming courses provide the background knowledge and skills to construct computer programs in one or more languages. Computer coding and program structure are often introduced with the BASIC language, but other computer languages such as Pascal or COBOL may be used instead. Initially, students learn to structure, create, document, and debug computer programs. In advanced courses, more emphasis is placed on design, style, clarity, and efficiency. Computer Science/ Programming courses may provide opportunities to apply the learned skills to relevant applications such as modeling, data management, graphics, and text processing.

0324 BASIC Programming

BASIC Programming courses provide the opportunity to gain expertise in computer programs using the BASIC language. As with more general computer programming courses, the emphasis is on how to structure and document computer programs, and how to use problem-solving techniques. As students advance, they learn to capitalize on the features and strengths of the BASIC language (loops, subscripted variables, and sequential and random access data files) and to place more emphasis on clarity and efficiency.

0325 Pascal Programming

Pascal Programming courses provide the opportunity to gain expertise in computer programs using the Pascal language. As with more general computer programming courses, the emphasis is on how to structure and document computer programs, and how to use problem-solving techniques. However, as students advance, they learn to capitalize on the features and strengths of Pascal (top-down design, procedures, and loops) and to place greater emphasis on design and efficiency.

0326 Computer Programming—Other Language

Computer Programming—Other Language courses provide the opportunity to gain expertise in computer programs using languages other than BASIC and Pascal, such as FORTRAN, COBOL, C, and so on. As with other computer programming courses, the emphasis is on how to structure and document computer programs, and how to use problem-solving techniques. As students advance, they learn to capitalize on the features and strengths of the language being used.

0327 AP Computer Science

Designed to mirror college-level introductory courses in computer science, AP Computer Science courses provide the logical, mathematical, and problem-solving skills to design structured, well-documented computer programs that provide solutions to real-world problems. Programming methodology, features, and procedures; algorithms; data structures; computer systems; and responsibility are topics covered in relation to real applications. AP Computer Science courses usually use the Pascal language.

0328 IB Computing Studies

IB Computer Studies courses prepare students to take the International Baccalaureate Computing Studies exam at either the Subsidiary or Higher level. Usually a two-year study, the courses emphasize problem analysis, efficient use of data structures and manipulation procedures, and logical decision making. The IB Computing Studies course content also covers the applications and effects of the computer on modern society as well as the limitations of computer technology.

0395 Computer and Information Sciences—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in occupations involving computer and computer-related technologies; such topics may include mathematics, science, and/or technical reading.

0396 Computer and Information Sciences—Independent Study

Computer and Information Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore computer-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular programming language, explore a topic of special interest within the computer industry, or develop skill in a specific computer application.

0397 Computer and Information Sciences—OJT

Through Computer and Information Sciences—OJT courses, work experience is gained within either the computer or information sciences fields. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Computer and Information Sciences—OJT experience.

0398 Computer and Information Sciences—Co-op

Computer and Information Sciences—Co-op courses provide work experience in the computer and/or information sciences fields, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0399 Computer and Information Sciences—Other

Construction Trades (04)
subject fields and course descriptions

This subject area encompasses courses that concern the knowledge and skills necessary for the assemblage of materials to create residential or commercial buildings, including carpentry, masonry, ventilation and air conditioning, plumbing, electricity, and electronics.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0401 Construction Careers Exploration

Construction Career Exploration courses expose students to the opportunities available in construction-related trades, such as carpentry, masonry, air conditioning/refrigeration, plumbing, and so on. Students learn about the processes involved in construction projects, and may engage in a variety of small projects. Emphasis is placed on responsibilities, qualifications, work environment, rewards, and career paths within construction-related fields.

0402 Construction

Construction courses provide basic knowledge and skills required for construction of commercial, residential, and institutional structures. These courses provide experiences and information (typically including career opportunities and training requirements) regarding construction-related occupations such as carpentry, cabinetmaking, bricklaying, electrical trades, plumbing, concrete masonry, and so on. Students engage in activities such as reading blueprints, preparing building sites, starting foundations, erecting structures, installing utilities, finishing surfaces, and providing maintenance. Advanced courses may include study of transportation systems and infrastructures.

0414 Carpentry

Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods, and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills.

0415 Framing Carpentry

Framing Carpentry courses provide students with much of the same knowledge as general carpentry courses (knowledge of various types and grades of woods, proper and safe use of hand and power tools, site selection and preparation), but place a special emphasis on construction methods applicable to floor, wall, roof, and/or stair framing. Course content may also include insulation installation and painting.

0416 Particular Topics in Carpentry

Courses falling within the Particular Topics in Carpentry category are specialized courses concerned with building construction or carpentry. All course work focuses upon a particular skill or set of skills related to one sub-topic, such as Floor Framing, Wall and Partition Framing, Interior Finishing, or Exterior Finishing.

0417 Woodworking

Woodworking courses introduce students to the various kinds of woods used in industry, and offer experience in using selected woodworking tools. Students design and construct one or more projects, and may prepare a bill of materials. Correct and safe use of tools and equipment is emphasized. As students advance within Woodworking classes, they focus on learning the nomenclature of power tools, developing skills to safely use these tools in the workshop, and becoming familiar with various kinds of wood-finishing materials. Advanced students typically design a project, prepare bills of materials, construct, and finish proposed projects.

0418 Cabinetmaking

Cabinetmaking courses provide experience in constructing cases, cabinets, counters, and other interior woodwork. Students learn to distinguish between various types of furniture construction and their appropriate applications. Various woodworking machines and power tools for cutting and shaping wood are introduced and used. Cabinetmaking courses cover the different methods of joining pieces of wood, how to use mechanical fasteners, and how to attach hardware; beginning courses may resemble Woodworking courses. Advanced classes teach how to install plastic laminates on surfaces and how to apply spray finishes.

0423 Masonry

Masonry courses enable students to learn to construct interior and exterior walls, columns, doorways, window openings, fireplaces, chimneys, and foundations from brick and concrete block. Along with other activities, students may mix and spread cement and mortar, read blueprints and plans, and estimate materials needed for a project. Training may also be offered on how to layout buildings on footings and to establish grades using a surveying transit. Some courses may treat one or more of these topics in particular detail.

0431 Air Conditioning

Air Conditioning courses offer specialized training related to the design, installation, and repair of air conditioning systems for residential and commercial use. Air Conditioning courses may emphasize the theory and design of electrical, electronic, mechanical, and pneumatic control systems used in air conditioning systems; they might also (or instead) focus on procedures used in troubleshooting, servicing, and installing components of air conditioning systems.

0432 Refrigeration

Refrigeration courses provide exposure to and training in the theories, equipment, and skills needed to design, install, and repair commercial and residential refrigeration systems. Course topics typically include the theory of thermodynamics, measurement of pressures and temperatures, components and common accessories of refrigeration systems, and repair and safety procedures.

0433 Heating

Heating courses offer training specific to the design, installation, and repair of heating systems for residential use. Topics typically include electric, gas, and/or steam systems; ventilation procedures; safety practices; and installation and trouble-shooting techniques.

0434 Air Conditioning/Refrigeration

Air Conditioning/Refrigeration courses enable students to develop the combined skills and knowledge to install, maintain, adjust, and repair both air conditioning and refrigeration systems.

0435 Air Conditioning/Heating/Refrigeration

In Air Conditioning/Heating/Refrigeration courses, students learn the basic principles of these systems, along with the identification and safe use of tools/equipment used in the trade.

0436 Heating/Ventilation/Air Conditioning

These courses synthesize basic and advanced principles in heating, ventilation, and air conditioning, including topics such as air filtration methods, humidity control, and the installation and maintenance of heat pumps, furnaces, and air conditioners. Students also learn climate control systems; electrical wiring; systems design; sizing, fabricating and installing ductwork; installing and maintaining climate control systems; and safety.

0437 Particular Topics in HVACR

These courses offer specialized training in aspects or topics that are common to various climate control systems (heating, ventilation, air conditioning, and refrigeration systems); such topics may include electrical components, diagrams and blueprints, welding and soldering techniques, and so on.

0438 Plumbing

Plumbing courses provide instruction in installing waste and vent systems, water and gas pipes, trim, and fixtures. Skills taught include cutting and joining various types of pipe (for instance, steel, plastic) using various methods (cement, seat method, and so on). Course topics may also cover plumbing occupations, employability skills, and entrepreneurship.

0439 Plumbing and Heating

Plumbing and Heating courses deal with the installation, assembly, maintenance and repair of piping, plumbing, heating equipment, and water and drainage systems. Topics covered include computation of heat losses and BTU requirements, and blueprint reading. Students gain experience with electric, gas, and oil furnaces; vacuum pumps; air compressors; and mechanical and pneumatic testing equipment.

0441 Exploration of Electricity/Electronics

Exploration of Electricity/Electronics courses offer instruction in the theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity, electronics, and related fields. Topics included are those relevant to these careers, such as Ohm's law, electrical equipment, wire systems, and so on; career exploration is often (but not always) an integral part of these courses.

0442 Electricity—Comprehensive

Electricity—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. AC and DC circuitry, safety, and the National Electrical Code are typically covered; skills covered may include those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students progress, their projects become more complex and expansive. Safety is stressed, and the courses may include a career exploration component.

0443 Residential Wiring

Covering many of the same topics as Electricity—Comprehensive courses, Residential Wiring courses apply the knowledge and skills gained particularly to the electrical systems found in family dwellings. Because these courses emphasize residential electricity, topics may also include cable installation, telephone systems, and installation of lighting fixtures, outlets, and so on. Maintenance and repair skills are often included as course topics.

0444 Industrial Electricity

Covering many of the same topics as Electricity—Comprehensive courses, Industrial Electricity courses apply the knowledge and skills gained particularly to the electrical systems used in industry. Because of this emphasis, Industrial Electricity courses may also include installation of transformers and control devices, emergency generator systems, and other industrial applications as course topics.

0445 Particular Topics in Electricity

These courses offer specialized training in particular topics relevant to students who are preparing to be electricians.

0452 Electronics—General

Electronics—General courses offer training in the theory and skills involved in repairing and rebuilding electronic equipment such as radios, television sets, and industrial equipment; they typically include the basic theory of electricity as well. Course topics may include AC, DC, analog, and integrated circuitry, solid state and digital devices, amplifiers, and semiconductors.

0453 Particular Topics in Electronics

Individual courses in this category offer specialized training in topics related to electronics and occupations in electronics such as diodes, transistors, digital techniques, solid-state devices, analog circuits, and microprocessors.

0462 Electricity/Electronics—General

Electricity/Electronics—General courses teach fundamental concepts of electricity and electronics, including safety procedures, and may introduce students to the available occupations in electrical and electronic industries. Topics covered typically include the following: components of circuits; reading schematics and diagrams; electricity and electronics as sources of energy and communications; and using equipment common to these occupations, such as ammeters, voltmeters, capacitor checkers, transistor testers, signal generators, and ohmmeters.

0463 Particular Topics in Electricity/Electronics

These courses provide instruction in the theory and skills needed in careers involving electricity, electronics, and related fields that focus on electrical wiring (for example, refrigeration, air conditioning). The courses included in this category treat topics common to these fields in some detail.

0473 Building Maintenance

Building Maintenance courses train students to maintain commercial, industrial, and residential buildings and homes. Instruction is provided in the basic maintenance and repair of air conditioning, heating, plumbing, electrical, and other mechanical systems. Topics covered may include identification and safe use of hand and power tools; installing and repairing floor coverings, walls, and ceilings; installing and repairing doors, windows, screens, and cabinets; applying finishes to prepared surfaces; and repairing roofs, masonry, plumbing, and electrical systems.

0494 Electricity/Electronics—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in occupations involving electricity or electronics; such topics may include mathematics, science, technical reading, or other related topics.

0495 Construction Trades—Related Subjects

Construction Trades—Related Subjects courses provide skills and knowledge necessary or useful for particular occupations or technologies within the construction trades. Particular topics and skills, or their applications, covered in these courses may vary with the occupation or technology. (For example, mathematics for carpentry students may differ somewhat from mathematics for plumbing students.)

0497 Construction Trades—OJT

Through Construction Trades—OJT, work experience is gained within the construction or related field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Construction Trades—OJT experience.

0498 Construction Trades—Co-op

Construction Trades—Co-op courses provide work experience in the construction or related field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study of the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0499 Construction Trades—Other

Consumer and Homemaking Education (05)
subject fields and course descriptions

This subject area encompasses courses that concern creating and maintaining a healthy home and personal lifestyle, including food and nutrition, parenting, consumer economics, and personal development and management.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

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1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
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5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0502 Consumer Home Economics—General

Consumer Home Economics—General courses are inclusive studies of the knowledge and skills useful for the efficient and productive management of the home. These courses typically include foods and nutrition; clothing; child development and care; housing design, decoration, and maintenance; consumer decisions; and interpersonal relationships. They may include an introduction to the careers available in the home economics field.

0503 Food and Nutrition

Food and Nutrition courses provide students with an understanding of the role food plays in society, instruction in how to plan and prepare meals, experience in the proper use of equipment and utensils, and a background of the nutritional needs and requirements for healthy living. Some classes place a heavier emphasis on the nutritional components of a balanced diet (weight control, eating disorders, principles of digestion), while others concentrate on specific types of food preparation (particular cuisines, baked goods, large social settings). Although career opportunities in the food service industry may be presented, the emphasis of these courses is not career-related.

0504 Food Science

Combining the disciplines of Home Economics and Science, Food Science courses offer opportunities to study the composition, structure, and properties of foods and the chemical changes that occur during processing, storage, preparation, and consumption. Designed as a laboratory course, Food Science explores the effects of various materials, microorganisms, and processes on food products.

0505 Child Development/Parenting

Child Development/Parenting classes provide knowledge about the physical, mental, emotional, and social growth and development of children from conception to pre-school age. In addition, these classes help students discover what parental responses the various stages require. Included in this study are related topics such as the prenatal and birth process; responsibilities and difficulties of parenthood; fundamentals of children's emotional and physical development; and appropriate care of infants, toddlers, and young children.

0506 Clothing/Sewing

Clothing/Sewing courses introduce and expand upon the various aspects of wearing apparel, sewing, and fashion. Information provided usually covers wardrobe planning; selection, care, and repair of various materials; and construction of one or more garments. Clothing/Sewing courses may also include related topics, such as fashion design, fashion history, social and psychological aspects of clothing, careers in the clothing industry, and craft sewing.

0513 Life Skills

Life Skills courses provide students with information in a wide range of subjects in order to assist them in becoming wise consumers and productive adults. Goal setting, decision making, and prioritizing; money and time management; relationships; and the development of the self are often emphasized. Practical exercises regarding housing selection and furnishing, meeting transportation needs, food preparation, clothing and wardrobe building are often an integral part of these classes. In addition, specific topics such as insurance, taxation, and consumer protection may also be covered.

0514 Self Management

Self Management courses introduce the skills and strategies helpful in becoming more focused, productive individuals. These courses typically emphasize goal setting; decision making; management of time, energy, and stress; and identification of alternatives and coping strategies. Career and lifestyle choices may be explored.

0515 Family Living

Family Living courses place their emphasis on building and maintaining healthy interpersonal relationships among family members and other members of society. Family Living classes most often emphasize (but are not limited to) topics such as social/dating practices, human sexuality and reproduction, marriage preparation, parenthood and the function of the family unit, and the stages of life. Individual self-development, career-development, personal awareness, and preparation for the responsibilities as family member and wage earner may also be covered.

0516 Personal Development

Similar to Family Living courses, but more focused on the individual, Personal Development courses emphasize self-esteem, recognition of and resistance to negative peer pressure, and developing coping skills for dealing with changes within one's self and within others. May have a substance-abuse prevention component.

0517 Consumer Economics/Personal Finance

Consumer Economics/Personal Finance provides an understanding of the concepts and principles involved in managing one's personal finances. Topics may include savings and investing, credit, insurance, taxes and social security, spending patterns and budget planning, contracts, and consumer protection. An overview of the American economy may be provided.

0523 Home Furnishing

Home Furnishing courses provide students with basic knowledge regarding interior design and decoration of the home for the individual or family. While exploring design principles, personal needs and style, and decision making, the following topics may be explored: color, texture, furniture styles and arrangement, lighting, window treatments, floor and wall coverings, and home improvement/modification. Home Furnishing courses may cover architectural style and design, and might also take a larger look at housing problems or current housing issues.

0524 Home Maintenance

Home Maintenance courses provide information about the devices and systems found in the home. Areas covered include electrical wiring, plumbing, window and door repair and installation, wall and floor repair and finishing, furniture repair and finishing, and small appliance repair.

0525 Special Education Home Maintenance

Special Education Home Maintenance teaches useful skills for basic home maintenance including home grounds maintenance, small household repairs, the use and care of common household tools, and the construction of simple household projects.

0526 Consumer and Homemaking Education—Integrated

Consumer and Homemaking Education—Integrated courses can take many forms, but basically combine subjects within the Home Economics field with those from another field, such as science, auto mechanics, or health. These courses may be team-taught by teachers from each discipline.

0599 Consumer and Homemaking Education—Other

Cosmetology (06)
subject fields and course descriptions

This subject area encompasses courses that concern the knowledge and skills applicable to the care of hair, skin, and nails.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0603 Cosmetology—Licensing

Cosmetology—Licensing courses provide students with the knowledge and skills applicable to the care of hair, skin, and nails, and prepare students for the state's Board of Cosmetology examinations. Almost always a series of courses with a specified number of instructional hours, Cosmetology—Licensing courses also require applied experience. Course content covers such topics as human anatomy and skin conditions, chemistry and bacteriology, sanitation and sterilization, state laws and regulations, and shop management. Experiences are provided in shampooing, cutting, styling, bleaching, coloring, tinting, waving, and relaxing hair; and providing facials and manicures.

0604 Barbering

Barbering courses provide students with the skills and experience to shave, style, and trim mustaches and beards, and to cut, shampoo, and style hair. Course topics include hygiene, skin and scalp disease, and use of equipment. Barbering courses may aim to prepare students for the state's licensing examinations and may include topics similar to those included in Cosmetology courses.

0605 Cosmetology—Non-licensing

Cosmetology—Non-licensing courses provide students with the knowledge and skills applicable to the care of hair, skin, and nails, but do not necessarily prepare students for the state's Board of Cosmetology examinations. Experience is gained in hair care, facials, and manicures; course topics may include human anatomy, sanitation and sterilization, and chemistry and bacteriology. Shop management and state regulations may be included.

0606 Cosmetology—Nail Specialization

Cosmetology—Nail Specialization courses offer experience in providing manicures, pedicures, and nail extension treatments. These courses may also include topics such as hygiene, entrepreneurship, human relations, and other related subject matter.

0607 Cosmetology—Facial Specialization

Cosmetology—Facial Specialization courses offer information and experience related to skin care, the provision of facials, make-up application, and facial massage. These courses may also include topics such as hygiene and sanitation, human anatomy and skin conditions, entrepreneurship, and/or human relations.

0695 Cosmetology—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in cosmetology occupations; such topics may include mathematics, science, entrepreneurship, and so on.

0697 Cosmetology—OJT

Through Cosmetology—OJT courses, work experience is gained within the cosmetology field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Cosmetology—OJT experience.

0698 Cosmetology—Co-op

Cosmetology—Co-op courses provide work experience in the cosmetology field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0699 Cosmetology—Other

Drafting (07)
subject fields and course descriptions

This subject area encompasses courses that concern the technical craft of drawing illustrations to represent or to specify the design of architectural structures, engineering projects, electrical or electronic systems, and mechanical or industrial applications.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
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5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
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6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0701 Drafting Careers Exploration

Geared for students with a possible interest in careers that use drafting skills and applications, Drafting Careers Exploration courses expose students to the opportunities available for draftspeople (engineering, architectural, industrial, and so on). These courses serve to introduce basic skills and the field in general, providing students the opportunity to identify a focus for continued study or to determine that their interests lie elsewhere.

0702 Drafting—General

Drafting—General courses, usually offered as a sequence of courses, introduce students to the technical craft of drawing illustrations to represent and/or analyze design specifications, and then refine the skills necessary for this craft. Drafting—General courses use exercises from a variety of applications to provide students with the knowledge and experience to develop the ability to perform freehand sketching, lettering, geometric construction, multiview projections, and to produce various types of drawings (working, detail, assembly, schematic, perspective, and so on). Computer-aided drafting (CAD) systems (if available) are typically introduced and used to fulfill course objectives.

0703 Drafting—Architectural

Drafting—Architectural courses introduce and refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from architectural applications. General drafting skills are developed, but a particular emphasis is placed on interior and exterior residential (and light commercial) design, site orientation, floor plans, electrical plans, design sketches, and presentation drawings. Students may prepare scale models.

0704 Drafting—Civil/Structural

Drafting—Civil/Structural courses introduce and refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from civil engineering and/or structural applications. General drafting skills are developed, but a particular emphasis is placed on skills needed for typography and survey work.

0705 Drafting—Electrical/Electronic

Drafting—Electrical/Electronic courses introduce and refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from electric and/or electronic fields. General drafting skills are developed, but a particular emphasis is placed on those skills needed for electrical and electronic schematics.

0706 Drafting—Technical/Mechanical

Drafting—Technical/Mechanical courses introduce and refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from industrial applications. General drafting skills are developed, but a particular emphasis is placed on sectioning, auxiliary views, revolutions, and surface development. Basic machining and fabrication processes may be introduced as students draw schematic diagrams featuring cams, gears, linkages, lever, pulleys, and so on. Drafting—Technical/Mechanical courses are often used as prerequisites for other drafting courses.

0707 CAD Design and Software

Frequently offered as an intermediary step to more advanced drafting courses (or as a concurrent course), CAD Design and Software courses introduce students to the computer-aided drafting systems available in the industry.

0712 Blueprint Reading—General

Blueprint Reading—General courses provide students with the knowledge and ability to interpret the lines, symbols, and conventions of drafted blueprints. The general emphasis is on interpretation, not production, of blueprints, although the courses may provide both types of experiences. General Blueprint Reading courses use examples from a wide variety of industrial and technological applications.

0713 Blueprint Reading—Related

Blueprint Reading—Related courses provide students with the knowledge and ability to interpret the lines, symbols, and conventions of drafted blueprints specific to a given industry. Blueprint Reading—Related courses are typically taken in conjunction with courses in the related industry.

0795 Drafting—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in drafting occupations; such topics may include mathematics, art, design, technical reading, or other related topics.

0796 Drafting—Independent Study

Drafting—Independent Study courses, often conducted with instructors as mentors, enable students to explore drafting-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular industry application, to explore a topic of special interest within a related industry, or to develop greater drafting skills.

0797 Drafting—OJT

Through Drafting—OJT courses, work experience is gained in drafting-related careers in one of several industries. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Drafting—OJT experience.

0798 Drafting—Co-op

Drafting—Co-op courses provide work experience in marketing careers, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0799 Drafting—Other

Elective Activities (08)
subject fields and course descriptions

This subject area encompasses courses that do not concern a particular subject field or discipline; included within it are courses that provide general test preparation, study skills, and special assistance; opportunities for peer tutoring, community service, and internships; and exposure to leadership and school governance.

Subject Fields

Subject Field #1

0 - No information requested for this field.

Subject Field #2

0 - No information requested for this field.

Subject Field #3

0 - No information requested for this field.

Code Title and Description

0801 Standardized Test Preparation

Standardized Test Preparation courses help prepare students for national standardized tests such as the PSAT, SAT, and ACT. These courses seek to develop and/or expand students' vocabulary, test-taking, and reasoning skills through study, lecture, and practice drills. Course topics may include vocabulary review; root words, prefixes, and suffixes; mathematical concepts, logic, and rules; and general problem-solving and test-taking strategies.

0802 State Test Preparation

State Test Preparation courses prepare students for particular state tests required for graduation. These courses may cover specific content areas (such as citizenship, mathematics, language arts, and so on) according to individual student needs, or may be a more general course of study, similar to the Standardized Test Preparation course described above.

0803 Study Skills

Courses in Study Skills prepare students for success in high school or for post-secondary education. Course topics may vary according to the audience, but may include reading improvement skills, such as scanning, note-taking, and outlining; library and research skills; listening, note-taking, and vocabulary skills; and test-taking skills. The course may also include exercises to generate organized and logical thinking and writing.

0811 Dropout Prevention Program

Dropout Prevention Program courses vary widely, but typically are targeted for students who have been identified as being at risk of dropping out or failing out of school. Course content may include study skills and individual tutorials; job preparation, readiness, application, or interview skills; communication skills; personal assessment and awareness activities; speaker presentations; and small group seminars.

0821 Student Aide

Student Aide courses provide students with the opportunity to work in one of several campus offices (front, attendance, guidance, athletic offices, in the library or audio-visual center, or with individual teachers), assisting the appropriate professionals with their duties. *Note: if the particular area (office or subject) is known, use the codes below or within the particular subject area.*

0822 Office Aide

Office Aide courses provide students with the opportunity to work in campus offices, developing skills related to clerical office work. Duties may include, among others, typing, filing, recordkeeping, receiving visitors, answering the telephone, and duplicating. Emphasis is placed on appropriate work attitude, human relations, and proper office procedures.

0823 Teacher Aide

Teacher Aide courses provide students with the opportunity to assist teachers with classroom duties. *Note: if the particular subject area is English Language and Literature or Life and Physical Science, use the code associated with the aide course within that subject area.*

0824 Guidance Aide

Guidance Aide courses provide students with the opportunity to work in the campus guidance office. Duties may include, among others, typing, filing, recordkeeping, assisting students, answering the telephone, and duplicating. Students may also act as guides to new students. Emphasis is placed on appropriate work attitude, human relations, and proper office procedures.

0825 Library/AVC Aide

Library/AVC Aide courses provide students with the opportunity to work in the library or audiovisual center. Duties may include collecting, distributing, and categorizing materials; operating audiovisual equipment; assisting students and teachers; and clerical duties. Students typically gain experience in library science and/or media and audiovisual technology.

0831 Tutoring Practicum

Tutoring practicums provide students the opportunity to offer tutorial assistance to their peers or to younger students. After an initial training period during which students learn how to work with other students and how to capitalize on the available resources (e.g., staff, written material, audiovisual aids, etc.), students engage in tutoring and assisting others who need or request help.

0832 Tutorial

Tutorial courses provide students with the assistance they need to successfully complete their coursework. Tutors may be teachers or other students. Students may receive help in one or several subjects, according to their individual needs.

0833 Study Hall

Study Hall courses provide students with the opportunity and time to complete classroom assignments or school projects. Students typically work on their own, without the help of a tutor; however, they are supervised and usually remain in the classroom.

0841 Leadership

Leadership courses are designed to strengthen students' personal and group leadership skills, typically intended for students involved in extracurricular activities (especially as officers of organizations or student governing bodies). Leadership courses may cover topics such as public speaking, effective communication, human relations, parliamentary law and procedures, organization and management, and group dynamics.

0842 School Orientation

School Orientation courses provide an introduction to the culture of the school so that students may understand staff expectations and the school's structure and conventions. School Orientation courses are typically offered at private, alternative, or experimental schools and may vary widely according to the aims and methods of the school itself.

0843 School Governance

School Governance courses convene students as an entire student body to discuss common concerns, organize groups for action, make decisions, solve school-related problems. Because of the nature of the course, School Orientation courses are typically offered at private, alternative, or experimental schools.

0851 Community Service

Community Service courses provide students with the opportunity to receive school credit for volunteering their time, energy, and talents in a community service organization. The courses are usually (but not always) conducted with a seminar component, so that students' volunteer experiences can be used as learning experiences in problem solving, decision making, and effective communication.

0852 Executive Internship with Seminar

Executive Internship courses provide students with the opportunity to work alongside a community leader, administrator, or other type of professional, learning the concepts of management and professional activities. These courses have an in-school component as well (such as a seminar class) to discuss the employment experience, aspects of the business world, and problems encountered.

0853 Executive Internship without Seminar

Executive Internship without Seminar courses provide students with the opportunity to work alongside a community leader, administrator, or other type of professional, learning the concepts of management and professional activities. These courses do not have a regular in-school component (although the students typically have access to a school official, teacher, or coordinator to discuss concerns or problems).

0861 Values Clarification

Values Clarification courses enable students to undertake an exploration of individual and societal actions and implications, moving toward the development of a personal value structure and decision-making process. Examples of discussion topics include philosophy and religion, world resource allocation, genetic engineering, environmental issues, and death (euthanasia, suicide, and abortion).

0862 Seminar

Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills; group process skills, and problem solving and critical thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.

0896 Independent Research

Independent Research courses, typically organized as a mentorship with a teacher or outside professional, enable students to conduct investigations related to their field(s) of interest. *Note: if the particular subject area is known, use the code associated with the Independent/Directed Study course within that subject area.*

0899 Elective Activities—Other

Energy, Power, and Transportation Technologies (09)
subject fields and course descriptions

This subject area encompasses courses that concern the physics, mechanics, and repair of motorized vehicles (such as automobiles, motorcycles, aircraft, and water vessels) and small engines.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

0901 Introduction to Automobiles

Primarily intended as a personal automobile mechanics course, but also designed for students exploring future careers in automotive technologies. Introduction to Automobiles courses offer an introduction to the various mechanical systems in automobiles and basic experience in maintenance tasks. The course may also cover career opportunities in the auto and/or transportation field.

0911 Introduction to Mechanics/Transportation

Introduction to Mechanics/Transportation courses introduce the principles underlying various kinds of mechanics (aircraft, auto, diesel, and marine) and how energy is converted, transmitted, and controlled. The courses also provide information on career opportunities within the field of mechanics and/or transportation. Students learn employability skills, use of tools, and safety.

0912 Automotive Mechanics—Comprehensive

Automotive Mechanics—Comprehensive courses emphasize the diagnosis and repair of automobile engines and support systems such as brakes, cooling, drive trains, electrical/electronics components, emission, fuel, ignition, steering, suspension, and transmissions. The comprehension and use of repair manuals, safety, and employability skills (including shop management and entrepreneurship) are often included as course topics.

0913 Particular Topics in Automotive Mechanics

These courses provide instruction in particular topics in the field of auto mechanics. Although typically covering the diagnosis and repair of automobile mechanics, these courses concentrate upon or emphasize a particular system or condition, such as transmissions, brakes, fuel, exhaust, or electrical systems.

0914 Automotive Service

Automotive Service courses emphasize preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems. Public relations, sales techniques, and service station management may be included.

0915 Diesel Mechanics—General

Diesel Mechanics—General courses prepare students to maintain and repair diesel engines and related systems. Specific course topics may include principles underlying diesel engines, analyzing electrical circuits and systems, troubleshooting and repairing cooling systems, testing and repairing AC charging systems, reading and interpreting service manuals, and identifying the principles and components of fuel injection systems. Courses may also cover safety, employability skills, and entrepreneurship.

0916 Particular Topics in Diesel Mechanics

These courses cover specific topics relevant to occupations involving the maintenance and repair of vehicles with diesel engines, such as buses and trucks. One topic (or several closely related topics) concerning diesel mechanics is covered in specific detail in this type of course.

0917 Motorcycle Mechanics

Motorcycle Mechanics courses provide training for prospective motorcycle repairers and mechanics. Topics include (but are not limited to) the maintenance of frames and suspension, wheels and brakes, and drive trains; the servicing of fuel, exhaust, and electrical systems; performance of tune-ups; and the maintenance and repair of motorcycle engines. Students may also learn safety on the job, employability skills, and entrepreneurship.

0918 Small Engine Mechanics

Small Engine Mechanics courses provide students with the opportunity to learn to service and recondition small engines. Typically, two- and four-cycle engines are emphasized, although content may also include others. Opportunities are provided to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools, and so on.

0919 Marine Mechanics

The content of Marine Mechanics courses includes the service and repair of electrical, mechanical, power transfer, hydraulic, fuel, and cooling systems as applied to boat and/or ship engines; boat rigging; trailers; and sales merchandise. Courses may also cover communication, human relations, and employability skills, as well as safe, efficient work practices.

0922 Aircraft Power Plant

Aircraft Power Plant courses provide the information necessary to troubleshoot, test, repair, and install aircraft engines. Course content usually includes engine ignition, electrical, lubrication, cooling, exhaust, and fuel systems, along with aircraft instrumentation and safety features.

0923 Aircraft Airframe

Aircraft Airframe courses offer information and instruction related to the structure and mechanics of aircraft, typically including hydraulic and pneumatic, instrumental, fuel, electrical, cabin atmosphere, and landing gear systems. Aircraft metals and coverings and related welding skills are also covered within Aircraft Airframe courses.

0933 Automotive Detailing and Reconditioning

Automotive Detailing and Reconditioning courses provide training for employment as an automotive body or related repairer, an automotive detailer, and a new and used car preparation person. In these courses, students learn occupational safety rules; employability and entrepreneurship skills; how to clean vehicle interiors, engines, and exteriors; how to recondition paint and vinyl vehicle surfaces; how to perform minor upholstery and vinyl repairs; and how to apply vinyl pinstripes and window tint.

0942 Automotive Body Repair and Refinishing—General

These courses provide training for occupations involving the repair and refinishing of damaged or used cars. Course content may include (but is not limited to) stretching and shrinking auto body sheet metal; welding skills; frame and metal straightening; repair of fiberglass and synthetic materials; removing, repairing, and installing auto body parts such as panels, hoods, doors, and windows/glass; preparing vehicles and vehicle surfaces for refinishing; painting; applying body fillers; and estimating material and labor costs.

0943 Particular Topics in Automotive Body Repair and Refinishing

These courses provide specific instruction in individual topics relevant to the repair and refinishing of automobile bodies and surfaces. One topic or several closely related topics (such as non-structural part replacement, auto body welding, or plastic repair) receive particular attention in this type of course.

0944 Boat Repair/Refinishing

Boat Repair/Refinishing courses convey a broad range of information and skills about how to repair and refinish boat mechanics, structures, and surfaces. In these courses, students become proficient in marine terminology, learn to describe types of marine manufacturing and occupations, and learn to prepare new and existing wood, fiberglass, and metal surfaces for painting or refinishing. Safety, employability skills, and entrepreneurship are also included.

0953 Aviation

Aviation courses provide an understanding of the science of flight and typically include the history, regulations, and possible career paths within the aviation industry. Physics, the relationships of weight and balance, principles of navigation and flight control, ground and airport operations and services, and Federal Aviation Agency regulations are usually covered within Aviation courses.

0954 Barge and Boat Operation

In Barge and Boat Operation courses, students prepare for employment as ship, boat, and barge mates; boatswains; and deck hands. These courses cover navigation, operation, maintenance, loading and unloading, and emergency procedures, as well as skills necessary for life at sea (for example, cooking). Specific topics may include docking and undocking a vessel, engine maintenance, using navigational equipment such as chronometers and compasses, firefighting aboard ship, and CPR.

0963 Energy/Power

Energy/Power courses focus on one or several aspects of energy and power in transportation and work. Course content may include various sources of energy and their use in society (for example, characteristics, availability, conversion, storage, environmental impact, and socioeconomic aspects of various energy sources); principles involved in various means of energy transfer, such as electricity/electronics, hydraulics, pneumatics, heat transfer, and wind/nuclear/solar energies; and the transmission and control of power through mechanical or electrical devices such as motors and engines.

0995 Transportation Technology—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in occupations involving transportation technologies; such topics may include mathematics, science, and/or technical reading.

0997 Transportation Technology—OJT

Through Transportation Technology—OJT courses, work experience is gained within the transportation field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Transportation Technology—OJT experience.

0998 Transportation Technology—Co-op

Transportation Technology—Co-op courses provide work experience in the transportation field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

0999 Transportation Technology—Other

English Language and Literature (10)
subject fields and course descriptions

This subject area encompasses courses that concern primarily the use of the English language as it is written, read, spoken, and understood; courses included here may combine these goals, or may deal with them separately, as individual courses in literature, composition, speech, or reading.

Subject Fields

Type of Credit

(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.

1 - Primary English credit
(Often, graduation requirements include specific types of language arts credit, such as particular English courses, or one of several literature courses, and so on. This option signifies fulfillment of one of these specific language arts credit requirements.)

2 - Secondary English credit
(In addition to specific types of language arts credits, several school systems require additional coursework to fulfill graduation requirements. This option signifies fulfillment of one of these general or elective language arts credit requirements.)

3 - Social studies credit

4 - Fine Arts/Humanities credit

5 - Vocational credit

6 - Dual credit (in English and another subject area)

7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)

8 - Other type of credit

9 - Elective credit

(Subject Fields continued on next page)

Subject Fields, continued

Writing Opportunity

(Indicates, on average, how frequently students are required to write or to be involved in the writing process—composing, editing, revising, and so on.)

0 - Information not collected, unavailable, or missing.
1 - Less frequently than once per month
2 - At least once a month
3 - Every two weeks
4 - Weekly
5 - Daily

Prose Mastery

(If writing is an emphasis of the course, indicates the level of prose students are working to master during the course of the class. If a higher-coded option is chosen, it is assumed that students either practice or have mastered the lower-coded options as well.)

0 - Information not collected, unavailable, or missing.
1 - Word recognition, comprehension, and usage.
2 - Sentence structure, grammar, usage, and mechanics.
3 - Thematic paragraphs (may include journal and letter writing).
4 - Multi-paragraph essays and other short compositions (may include applications, biographies, creative writing, and news articles).
5 - Documented research papers and/or long critical analyses.

Code Title and Description

Note:
The predominant English language instructional style seems to be one in which all four communication aspects of the English language (reading, writing, speaking, and listening) are taught in an holistic manner all four years of high school. Students typically read literature selections and write essays and compositions on topics generated from those readings. The first four course descriptions *(English/Language Arts)* attempt to describe the typical experience under that instructional style.

However, some schools and school districts greatly emphasize one aspect (reading, writing, speaking, or listening) in particular years or semesters; the other aspects are not necessarily excluded, but simply receive less attention. The four course descriptions *(English/Literature and English/Composition)* that follow the first four Language Arts descriptions are intended to describe the courses offered under that instructional method. Students frequently have more options as to their sequence of courses, within constraints; thus, upper and lower division categories are used, rather than singular grade levels. Lower level refers to 9th and 10th graders; upper level refers to 11th and 12th graders.

1001 English/Language Arts I (9th grade)

English/Language Arts I (9th grade) courses build upon the students' prior knowledge of grammar, vocabulary, word usage, and mechanics of writing, and usually include the four aspects of language use: reading, writing, speaking, and listening. Usually, the various genres of literature are introduced and defined, with writing exercises often linked to reading selections.

1002 English/Language Arts II (10th grade)

English/Language Arts II (10th grade) courses usually offer a balanced focus on composition and literature. Typically, students learn about the alternate aims and audiences of written compositions by writing persuasive, critical, and creative multi-paragraph thematic essays and compositions. The study of literature encompasses various genres as students improve their reading rate and comprehension and develop the skills to determine authors' intent and theme and to recognize the techniques employed by the author to achieve the goal.

1003 English/Language Arts III (11th grade)

English/Language Arts III (11th grade) courses continue to develop students' writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students continue to read works of literature, which often form the backbone of the writing assignments. Literary conventions and stylistic devices may receive greater emphasis than in previous courses. Preparation for the PSAT may be included.

1004 English/Language Arts IV (12th grade)

English/Language Arts IV (12th grade) courses blend composition and literature into a cohesive whole, as students write critical and comparative analyses of selected literature. Typically, multi-paragraph essays predominate as the form of student composition, but one or more major research papers may also be written.

1005 English/Literature (lower level)

English/Literature (lower level) courses are designed for freshmen and/or sophomores and typically introduce two or more genres of literature (novel, short story, poetry, and so on). Exploration of each genre's literary elements; determination of theme and intent; and vocabulary and semantics are often included as part of the course content. Writing assignments may be required as an additional method to improve understanding and comprehension.

1006 English/Literature (upper level)

English/Literature (upper level) courses are designed for juniors and/or seniors and emphasize comprehension, discernment, and critical thinking skills in the reading of texts and literature. More advanced literary techniques (irony, satire, humor, connotation, tone, rhythm, symbolism, and so on) are introduced and explored through two or more literary genres, with the aim of creating sophisticated readers. Writing assignments may be required as an additional method to develop and improve critical thinking and analytic skills.

1007 English/Composition (lower level)

English/Composition (lower level) courses are designed for freshmen and/or sophomores and build upon previous writing skills. These courses seek to develop the writing processes and practices necessary for producing successful high school compositions. Students typically learn to write persuasive, critical, and creative multi-paragraph thematic essays and compositions. Literature may be studied as an accompaniment, to expose students to exemplary illustrations of various forms of writing.

1008 English/Composition (upper level)

English/Composition (upper level) courses are designed for juniors and/or seniors and build upon previous writing skills. Reinforcing the logic and critical thinking skills that accompany good writing, these courses provide continued and advanced instruction in writing for a variety of purposes and audiences. Word choice, usage, and writing mechanics are frequently emphasized. English/Composition (upper level) courses may emphasize college or business preparation; literature study may be an additional component in order to analyze examples of several genres.

1009 Language Arts Laboratory

Language Arts Laboratory courses provide instruction in basic language skills, integrating reading, writing, speaking and listening while placing great emphasis on individual student progress. Course content depends upon student abilities upon entrance into the course, and may include vocabulary building, spelling and grammar, writing and composition, reading silently or aloud, and improving listening and comprehension abilities. Language Arts Laboratory courses may or may not be taught in a laboratory setting or resource center.

1010 Literature

Literature courses offer the opportunity for students to study and reflect upon the themes presented in the body of literature being presented. Students improve their critical thinking skills as they determine the underlying assumptions and values within the reading selection, and as they understand how the work reflects society's problems and culture. Oral discussion is an integral part of literature courses and written compositions are sometimes required, often with an emphasis toward college preparation. Literature courses may survey representative works, reflect a particular genre or a specific theme, or survey works of a particular time or people.

1011 Composition

Composition courses focus on a student's writing skills, and develop the student's ability to compose different types of papers for different purposes and audiences. Descriptive, narrative, persuasive, or expositive styles may all be explored and practiced as students write paragraphs, essays, letters, applications, formal documented papers, or technical reports. Although creative writing opportunities may be presented, the focus of composition courses usually remains on non-fiction, scholarly, or formal writing.

1012 AP English Language and Composition

Designed to parallel college-level English courses, AP English Language and Composition courses expose students to prose written in a variety of periods, disciplines, and rhetorical contexts. Emphasis is placed on the interaction of authorial purpose, intended audience, and the subject at hand; students learn to develop stylistic flexibility as they write compositions covering a variety of subjects and intended for various purposes.

1013 AP English Literature and Composition

Designed to parallel college-level English courses, AP English Literature and Composition courses enable students to develop critical standards for evaluating literature. Students study the language, character, action, and theme in works of recognized literary merit; enrich their understanding of connotation, metaphor, irony, syntax, and tone; and write compositions of their own (including literary analysis, exposition, argument, narrative, and creative writing).

1014 IB Language A (English)

IB Language A (English) courses prepare students to take the International Baccalaureate Language A exams at either the Subsidiary or Higher level. Course content includes in-depth study of literature chosen from the appropriate IB list of texts and authors, and written analyses of this literature in addition to other oral and written assignments. All course content is designed to improve students' accuracy and fluency in the English language. IB Language A (English) may be offered either as a singular course or as a progressive series of courses.

1021 Creative Writing

Creative Writing classes offer students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. The emphasis of the class is on writing, although exemplary representations and authors may be studied to provide a fuller appreciation of the form and craft. Although most creative writing classes cover several expressive forms, others concentrate exclusively on one particular form (such as poetry or playwriting).

1022 Technical Writing

Technical Writing classes prepare students to write research papers and/or technical reports. Researching (primary and secondary sources), organizing (material, thoughts, and arguments), and writing in a persuasive or technical style are emphasized topics.

1031 Assisted Reading

Assisted Reading courses offer students the opportunity to focus on their reading skills. Assistance is targeted to students' particular weaknesses, and is designed to bring poor readers' reading comprehension up to the desired level (often a standardized test required for graduation), or to develop strategies to read more efficiently in order to progress at a steady rate through high school.

1032 Advanced Reading

Advanced Reading courses are intended to improve a student's vocabulary, critical thinking, and analysis skills, or reading rate and comprehension level. Although works of fiction are typically emphasized, non-fiction may also be included. Advanced Reading courses often have a time-management focus, offering strategies for note-taking or for understanding and evaluating the important points of a text.

1041 American Literature/History

American Literature/History courses integrate the study of American literature with an overview of U.S. history. These courses may also include other aspects of American culture, such as art or music. A two-year sequence or two-period per day class may be required to cover the same objectives as would be covered separately in U.S. History Overview and American Literature.

1042 Literature/Fine Arts

Literature/Fine Arts courses provide students with the opportunity to explore the connection and interrelationships between a society's expressions of ideas and philosophies through its literature and its fine art (visual art, drama, architecture, music, and so on). Students may study a particular period in a country or region, or may explore the changes and development of literature and art over time.

1051 English Morphology and Grammar

English Morphology and Grammar courses involve the study of the English language—its roots and derivations, its structure and sentence patterns, its dialects and spelling systems, and its uses as a communication tool. These courses may also be a more simple study of vocabulary and test preparation.

1061 English as a Second Language

English as a Second Language (ESL) courses are designed for the rapid mastery of the English language, focusing on reading, writing, speaking, and listening skills. ESL courses usually begin with extensive listening and speaking practice, building on auditory and oral skills, and then move to reading and writing. Basic structures of the English language are explained, and students progress from an elementary understanding of English words and verb tenses to a more comprehensive grasp of various formal and informal styles, enabling the student to advance to "regular" English courses. An orientation to the customs and culture of people in the United States may be included in ESL classes.

1071 Business/Applied English

Business/Applied English courses teach students communication skills—reading, writing, listening, speaking—emphasizing applications in the "real world." The emphasis is usually on the practical application of communication as a business tool, and may focus on technical reports and manuals, business letters, resumes, and applications, as opposed to the course being designed around scholarly and literary uses.

1072 Applied Communications—AIT

Using the 15 modules developed by the Agency for Instructional Technology, Applied Communications—AIT courses focus on the language skills needed in the workplace. Gathering and using information, problem solving, presentation, evaluation, communicating with different audiences, and occupationally-specific topics are included in courses using AIT's curriculum.

1081 Public Speaking

Public Speaking courses enable students, through practice, to develop communication skills for a variety of speaking situations (such as small and large group discussions, delivery of lectures or speeches in front of audiences, and so on). Course topics may include (but are not limited to) research and organization, writing for verbal delivery, stylistic choices, visual and presentation skills, analysis and critique, and development of self-confidence.

1082 Forensics—Inclusive

Forensics—Inclusive courses offer students the opportunity to learn how to employ oral skills effectively in formal and informal situations. Logic and reasoning, the organization of thought and supporting materials, and effective presentation of one's voice and body are the skills imparted in forensics courses. Often linked to an extracurricular program, numerous public speaking situations are introduced, and students learn the methods, aims, and styles of a variety of events (e.g., formal debate, Lincoln-Douglas debate, expository speaking, radio broadcast, oral interpretation, and dramatic interpretation). Participation in competition is encouraged, but not always required.

1083 Forensics—Debate

Forensics—Debate courses offer students the opportunity to learn how to employ oral skills in formal and informal situations. Logic and reasoning, research and analysis, organization of thought and supporting materials, argumentative style and skill, and effective presentation of one's voice and body are developed through forensics courses. Often linked to an extracurricular program, students learn the methods, aims, and styles of the debating events (formal debate or Lincoln-Douglas). Participation in competition is encouraged, but not always required.

1084 Forensics—Individual Event

Forensics—Individual Event courses offer students the opportunity to learn how to employ oral skills in formal and informal situations. Topics depend upon the event(s) being taught, but effective presentation of one's voice and body, thoughtful understanding and interpretation of literature, logic and reasoning, and the organization of thought and supporting materials may be emphasized and developed. Often linked to an extracurricular program, one or several individual event categories are introduced (e.g., exposition, oral interpretation, dramatic interpretation, radio broadcast). Participation in competition is encouraged, but not always required.

1093 English Aide

English Aide courses offer interested students the opportunity to assist English and communication teachers in the preparation, organization, and distribution of instructional materials. Students may provide tutorial assistance to students under teacher guidance.

1096 English Language and Literature—Independent Study

English Language and Literature—Independent study, often conducted with instructors as mentors, allow students the opportunity to explore particular topics within the field of language arts that are not offered as part of the regular curriculum. These courses may be offered in conjunction with other subject area courses or as an opportunity for students to explore a particular topic of special interest.

1099 English Language and Literature—Other

Note:
Some English Language and Literature courses may be more adequately described by course descriptions within the following subject areas:

Mass Communication
Foreign Language and Literature (Sign Language)
Fine and Performing Arts—Drama (History and Literature of the Theater or Drama/Stagecraft with the acting/performance option)
Elective Activities (Test Preparation, Study Skills).

Fine and Performing Arts (11)
subject fields and course descriptions

This subject area encompasses courses that concern the development of artistic skill and appreciation in dance, drama, music, and visual art.

Subject Fields

Type of Credit

(If the state or district requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.
1 - Fine Arts, Humanities, or Performing Arts credit
2 - Physical Education credit
3 - Primary English credit
(If schools/districts have several types of required English credit, and the course fulfills a Literature/Writing credit, this option should be chosen. This option should also be chosen by schools/districts with only one type of English credit requirement.)
4 - Secondary English credit
5 - Vocational credit
6 - Dual credit (in English and another subject area)
7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8 - Other type of credit
9 - Elective credit

Auditions

(Indicates whether auditions are required prior to enrollment in the course.)

0 - Information not collected, unavailable, or missing.
1 - Auditions are required.
2 - Auditions are not required.

(Subject Fields continued on next page)

Subject Fields, continued

Primary Emphasis (Indicates the primary emphasis of the course.)

0 - Information not collected, unavailable, or missing.
1 - Skill, craftsmanship, or technique
2 - Public performance/production
(Students concentrate on technique, but also may be required or strongly encouraged to participate in public performances or displays.)
3 - Appreciation and/or evaluation of art form
4 - History (and literature, if applicable) of art form(s)
5 - Personal expression
6 - Working as a group
7 - Choreography/Composition
8 - Combination
9 - Other

Code Title and Description

1101 Dance Technique

Dance Technique courses provide experience in one or several dance forms (i.e., modern, jazz, ballet, tap). Initial classes are usually introductory in nature, while the more advanced classes concentrate on improving technique and may offer or require choreographic and evaluative experiences.

1102 Dance Repertory

Dance Repertory courses provide the opportunity for students with prior dance experience to develop dance techniques in small groups; these classes require auditions and emphasize performance.

1103 Expressive Movement

Expressive Movement courses develop students' ability to move expressively, without being based on particular dance forms or on developing specific dance techniques.

1105 Dance Appreciation

Dance appreciation courses expand knowledge of dance as an art form, and develop students' ability to evaluate dance performances. Learning the history of one or several dance forms may also be included as a course objective.

1106 Dance—Independent Study

Courses in Dance—Independent Study, often conducted with instructors or professional dancers/choreographers as mentors, enable students to explore a particular dance form in more detail and depth than in other courses. Polishing talent, building confidence for professional or apprenticeship auditions, and gaining experience in public performance are emphasized. Career opportunities may be explored.

1109 Dance—Other

1111 Introduction to the Theater

Introduction to the Theater courses provide an overview of the art, conventions, and history of the theater. Although experiential exercises may be included, the courses focus on learning about the theater rather than performance. Students learn about one or more of the following topics: basic techniques in acting, major developments in dramatic literature or major playwrights, the formation of theater as a cultural tradition, and critical appreciation of the art. Other aspects of theatrical production such as technical aspects, costume, makeup, and so on, may also be explored.

1112 Drama/Stagecraft—Comprehensive

Drama/Stagecraft courses are intended to promote students' experience and skill development in one or more aspects of theatrical production. Initial courses are usually introductory in nature, while the more advanced courses concentrate on improving technique, expanding the students' exposure to different types of theatrical techniques and traditions, and increasing their chances of participating in public productions. Career opportunities in the theater may be discussed.

1113 Drama—Acting/Performance

Drama—Acting/Performance courses are intended to promote students' experience and skill development in one or more aspects of theatrical production, but concentrate on acting and performance skills. Initial courses are usually introductory in nature, while the more advanced courses concentrate on improving technique, expanding the students' exposure to different types of theatrical techniques and traditions, and increasing their chances of participating in public productions. Career opportunities in the theater may be discussed.

1114 Drama—Stagecraft

Drama—Stagecraft courses are intended to promote students' experience and skill development in one or more aspects of theatrical production, but concentrate on stagecraft (such as lighting, costuming, set construction, makeup, stage management, and so on). Initial courses are usually introductory in nature, while the more advanced courses concentrate on improving technique, expanding the students' exposure to different types of theatrical techniques and traditions, and increasing their chances of participating in public productions. Career opportunities in the theater may be discussed.

1115 Directing

Usually taken after several other drama courses, Directing courses are intended to improve students' skills in translating a script to a final production. Directing classes enable students to create an artistic vision and develop a personal aesthetic, by expanding the students' exposure to different types of theatrical techniques and traditions, and providing opportunities to direct others' performances (either in scenes or in a full production).

1116 Playwriting

Usually taken after several other drama courses, Playwriting courses are intended to improve students' skills in creating a script suitable for live production. Playwriting classes enable students to develop a personal voice, style, and aesthetic by expanding their exposure to various playwrights and different types of theatrical techniques and traditions. Students are expected to write original scenes, one-act plays, or full productions.

1117 History and Literature of the Theater

History and Literature of the Theater courses explore in depth the structure, elements, and style of dramatic compositions, and, as an extension, how the dramatic literature influenced theatrical production and acting styles throughout history. Some courses may focus more on the literature than on the theater (with increased emphasis on critique and analysis), but most interweave these subjects, exploring their interrelationship. Major contributors (playwrights, directors, and so on) and the architecture of the theater may also be included topics of study.

1118 Drama/Stagecraft—Independent Study

Courses in Drama/Stagecraft—Independent Study, often conducted with instructors or artists as mentors, enable students to explore a particular theatrical form in more detail and depth than in other courses. Polishing talent, building confidence for professional or apprenticeship auditions, and gaining experience in public performance are emphasized. Career opportunities may be explored.

1119 Drama/Stagecraft—Other

1120 General Band

General Band courses develop technique for playing brass, woodwind, and percussion instruments, and cover a variety of non-specified band literature styles (concert, marching, orchestral, and modern styles).

1121 Concert/Marching Band

Courses in Concert/Marching Band are designed to develop skill and technique for playing brass, woodwind, and percussion instruments, and cover band literature styles for both concert and marching performances.

1122 Concert Band

Courses in Concert Band are designed to promote students' technique for playing brass, woodwind, and percussion instruments, and cover a variety of band literature styles, primarily for concert performances.

1123 Marching Band

Courses in Marching Band are intended to develop technique for playing brass, woodwind, and percussion instruments, and cover appropriate band literature styles, primarily for marching performances.

1124 Orchestra

Orchestra courses develop students' abilities to play brass, woodwind, percussion, and string instruments, covering a variety of string and orchestral literature styles.

1125 Contemporary Band

Contemporary Band courses develop technique for playing brass, woodwind, percussion, and string instruments, as well as guitar and keyboard, focusing primarily on contemporary stage band literature styles, such as traditional jazz, jazz improvisation, and rock.

1126 Instrumental Ensembles

These courses are intended to develop technique for playing brass, woodwind, percussion, and/or string instruments in small ensemble groups. Instrumental Ensemble courses cover one or more instrumental ensemble or band literature styles.

1127 Piano

Courses in Piano cover the fundamentals of music and basic keyboard techniques such as scales, chords, and melodic lines; the courses may include more advanced keyboard techniques.

1128 Guitar

Guitar courses present fundamentals of music and guitar playing techniques, such as strumming and chords; the courses may include more advanced guitar playing techniques.

1129 Individual Technique—Instrumental Music

Individual Technique—Instrumental Music courses provide instruction in instrumental techniques to individuals. These courses may be conducted on either an individual or small group basis.

1130 Chorus

Chorus courses provide the opportunity to sing a variety of choral literature styles for men's and/or women's voices, and are designed to develop vocal techniques and the ability to sing parts.

1131 Vocal Ensembles

Vocal Ensemble courses are intended to develop vocal techniques and the ability to sing parts in small ensemble or madrigal groups. The course goals may include the development of solo singing ability; one or several ensemble literature styles may be emphasized.

1132 Individual Technique—Vocal Music

Individual Technique—Vocal Music courses provide instruction in and development of vocal techniques other than the ability to sing in groups. These courses may be conducted on either an individual or small group basis.

1141 Music Theory

Courses in Music Theory teach an understanding of the fundamentals of music, and include one or more of the following topics: composition, arrangement, analysis, aural development, and sight reading; Music Theory courses may or may not require previous musical experience.

1142 AP Music Theory

Courses in AP Music Theory are designed to be the equivalent of a first-year music theory college course. AP Music Theory develops students' understanding of musical structure and compositional procedures. Usually intended for students already possessing performance-level skills, AP Music Theory extends and builds upon students' knowledge of intervals, scales, chords, metric/rhythmic patterns, and their interaction in a composition. Musical notation, analysis, composition, and aural skills are important components of the course.

1143 IB Music

IB Music courses prepare students to take the International Baccalaureate Music exam at either the Subsidiary or Higher level. IB Music courses develop students' knowledge and understanding of music, through training in musical skills (listening, performing, and composing), exposure to music theory, and formulation of an historic and global awareness of musical forms and styles. Historical, theoretical, and practical studies are suggested by the IB Curriculum Board.

1144 Music History/Appreciation

Music History/Appreciation courses survey different musical styles and periods with the intent of increasing enjoyment of different musical styles and/or developing an artistic or technical judgement. Music History/Appreciation courses may also focus on developing an understanding of a particular style or period.

1146 Music—Independent Study

Courses in Music—Independent Study, often conducted with instructors or professional musicians or voice coaches as mentors, enable students to explore music and their own abilities in more detail and depth than in other courses. Polishing talent, building confidence for professional or apprenticeship auditions, and gaining experience in public performance are emphasized. Career opportunities may be explored.

1149 Music—Other

1151 Art Appreciation

Art Appreciation courses introduce the many forms of art and help form an aesthetic framework through which art of various ages and cultures can be judged and critiqued. The place and significance of art in our society is explored.

1152 Art History

Art History courses introduce significant works of art, artists, and artistic movements that have shaped the art world and have influenced or reflected periods of history. The evolution of art forms, techniques, symbols, and themes is often emphasized.

1153 AP Art—History of Art

Designed to parallel college-level Art History courses, AP Art—History of Art courses provide the opportunity to critically examine architecture, sculpture, painting, and other art forms within their historical and cultural contexts. In covering the art of several centuries (not necessarily in chronological order), students learn to identify different styles, techniques, and influences, and to formulate and articulate their reactions to various kinds of artwork.

1161 Creative Art—Comprehensive

Creative Art—Comprehensive courses provide students with the knowledge and opportunity to explore an art form and to create individual works of art. Career opportunities in the art world may also be discussed and explored. Initial courses cover the language, materials, and processes of a particular art form and the design elements and principles supporting a work of art. As students advance and become more adept, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic styles. Although the focus of creative art courses is creation, the study of major artists, art movements, and styles may also be included.

1162 Creative Art—Drawing/Painting

Creative Art—Drawing/Painting courses cover the same topics as Creative Art—Comprehensive courses, but focus on drawing and painting. In keeping with this attention on two-dimensional work, students typically work with several media (such as pen and ink, pencil, chalk, watercolor, tempera, oils, and acrylics, and so on) but some courses may focus on only one.

1163 Creative Art—Sculpture

Creative Art—Sculpture courses cover the same topics as Creative Art—Comprehensive courses, but focus on creating three-dimensional works. Students typically work with several media (such as clay, ceramics, wood, metals, textiles, and so on) but some courses may focus on only one.

1164 Ceramics/Pottery

Ceramics/Pottery courses cover the same topics as Creative Art—Comprehensive courses, but focus on creating three-dimensional works out of clay and ceramic material. Particular attention is paid to the characteristics of the raw materials, the transformation under heat, and the various methods by which objects are created and finished.

1165 Printmaking/Graphics

Printmaking/Graphics courses cover the same topics as Creative Art—Comprehensive courses, but focus on design principles, printmaking, and graphic design.

1166 Textiles

Textiles courses teach the same lessons as Creative Art—Comprehensive courses, but do so with a focus on craft. A wide range of crafts may be surveyed, or the course may focus on only one type; possibilities include weaving, macramé, quilting, batik, stitchery, and so on.

1167 Crafts

Crafts courses teach the same lessons as Creative Art—Comprehensive courses, but do so with a focus on craft. A wide range of crafts may be surveyed, or the course may focus on only one type; possibilities include calligraphy, quilting, silk-screening, cake decorating, tole-painting, mask-making, knitting, crocheting, paper-making, and so on.

1171 Photography

Photography courses expose students to the materials, processes, and artistic techniques of taking artistic photographs. Students learn about the operation of a camera, composition, lighting techniques, depth of field, filters, camera angles, and film development. The course may cover black and white, or color photography, or both. As students advance, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic style. In order to develop each student's style and artistic eye, major photographers, art movements, and styles may also be studied.

1172 Film/Videotape

Film/Videotape courses expose students to the materials, processes, and artistic techniques involved in film or videotape. Students learn about the operation of a camera, lighting techniques, camera angles, depth of field, composition, storyboarding, sound capture, and editing techniques. Course topics may also include production values and various styles of filmmaking (documentary, storytelling, news magazines, animation, and so on). As students advance, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own artistic style. In order to develop each student's style and artistic eye, major filmmakers, cinematographers, and their films may also be studied.

1175 Computer-Assisted Art

Computer-Assisted Art courses enable students to discover and explore how the computer can be used to create or to assist in the production of various forms of artwork. Previous courses in the intended art form are usually not required for enrollment. Computer-Assisted Art courses provide the opportunity to become more adept in both the art form and in the use of the computer.

1181 Art Portfolio

Intended for students who are gifted in art, Art Portfolio courses offer the opportunity to create a professional body of work that reflects personal style and talent. Students are often encouraged to display their work publicly.

1182 AP Studio Art–General Portfolio

Designed for students with a serious interest in art, AP Studio Art–General Portfolio courses enable students to refine their skills and create artistic works to be submitted to the College Board for evaluation. Given the nature of the AP evaluation, the course typically emphasizes quality of work, attention to and exploration of a particular visual interest or problem, and breadth of experience in the formal, technical, and expressive aspects of the student's art. AP Studio Art–General Portfolio evaluations require submission of artwork exemplifying talent in drawing, color organization, design, and sculpture.

1183 AP Studio Art–Drawing Portfolio

Designed for students with a serious interest in art, AP Studio Art–Drawing Portfolio courses enable students to refine their skill and create artistic works to be submitted to the College Board for evaluation. Given the nature of the AP evaluation, the course typically emphasizes quality of work, attention to and exploration of a particular visual interest or problem, and breadth of experience in the formal, technical, and expressive aspects of drawing. Representation, abstraction, and experimentation with a variety of drawing materials are explored.

1184 IB Art/Design

IB Art/Design courses prepare students to take the International Baccalaureate Art/Design exams at either the Subsidiary or Higher level. IB Art/Design courses develop students' aesthetic and creative faculties, offer training in awareness and criticism of art, and enable students to create quality works of art of their own. Usually a two-year course, students will perform both studio and research work; the research component is designed to investigate particular topics or concepts of interest in further detail.

1186 Visual Art–Independent Study

Courses in Visual Art–Independent Study, often conducted with instructors or professional artists as mentors, enable students to explore a particular art form in more detail and depth than in other courses. Polishing talent, building confidence for professional showings or portfolio submission, and gaining experience in public performances or displays are emphasized. Career opportunities may be explored.

1189 Visual Art–Other

1194 Integrated Fine Arts

These courses explore self-expression across the fine arts: any subset or all of the visual arts, music, dance, theater, and literature may be included in the curriculum for these courses. Students both study and critique the works of others and participate in or produce art themselves. These courses often include comparative study of various art forms over time, i.e., the interrelationship of literature, music, and the performing arts of a particular time period and culture.

1195 Fine and Performing Art—Related Subjects

Courses in this category offer instruction in topics related to the fine and performing arts; such topics may include design principles, psychology, mathematics, and/or science.

1196 Fine and Performing Art—Independent Study

Courses in Fine and Performing Art—Independent Study, often conducted with instructors or professional artists as mentors, enable students to explore a particular art form in more detail and depth than in other courses. Polishing talent, building confidence for professional showings or portfolio submission, and gaining experience in public performances or displays are emphasized. Career opportunities may be explored.

1199 Fine and Performing Art—Other

Note:
Some courses may be more adequately described by course descriptions within the following subject areas:

Graphic and Printing Communication (Graphic Arts/Printing, Commercial Art, and Commercial Photography)
Industrial/Technology Education (General Industrial Arts, Metal and Wood Technology)
Mass Media (Mass Media—Production, Photojournalism)
Multi/Interdisciplinary Studies (Humanities Survey, Humanities)

Foreign Language and Literature (12)
subject fields and course descriptions

This subject area encompasses courses that concern development of communication skills using non-English languages and knowledge of the cultures and literatures of non-English-speaking peoples.

Subject Fields

Type of Credit

(Indicates the type of credit that students receive toward graduation upon completing the course.)

0 - Information not collected, unavailable, or missing.
1 - Foreign Language credit
2 - English credit
3 - Social studies credit
4 - Fine Arts/Humanities credit
5 - Vocational credit
6 - Dual credit (in Foreign Language and another subject area)
7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8 - Other type of credit
9 - Elective credit

Subject Field #2

0 - No information requested for this field.

Language Attainment

(Indicates whether the course emphasizes conversation or formal knowledge of vocabulary, grammar, and literature.)

0 - Information not collected, unavailable, or missing.
1 - The course is designed to emphasize knowledge of grammar, vocabulary, and literature, in all aspects of communication—reading, writing, listening, and speaking.
2 - The course is designed to enable students to become conversant enough to function in everyday situations or during travel, but does not emphasize the formal study of the language in all its aspects.

Note:
Because most foreign language courses are similar in their course objectives with the exception of the specific language [and associated culture(s)] being taught, the courses have not been described differently for each foreign language. The following *Foreign Language* description is being given as a description for individual language courses and is referenced by several of the courses within this subject area.

12xx *Foreign Language*

Foreign Language courses teach the language and culture of another people, usually through a series of sequential courses. First-year courses emphasize basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, and speak on a basic level. Second-year courses enable students to expand upon what they have learned, increasing their skills and depth of knowledge. Third- and fourth-year *Foreign Language* courses typically focus on having students express more complex concepts both verbally and in writing, and comprehend and react to native speech. Throughout the sequence of *Foreign Language* courses, appreciation of the cultures in which the language is spoken is taught, through study of native fine and/or popular art, literature, food, public behavior and expectation, traditions and holidays, and history.

Code Title and Description

1201 Spanish

See the description for 12xx, Foreign Language, substituting "Spanish" for "Foreign Language."

1202 AP Spanish Language

Designed to parallel third-year college-level courses in Spanish Composition and Conversation, AP Spanish Language courses build upon prior knowledge and develop students' ability to understand others and express themselves (in Spanish) accurately, coherently, and fluently in both formal and informal situations. Upon completing these courses, students will develop a large enough vocabulary to understand literary texts, magazine/ newspaper articles, films and television productions, and so on.

1203 AP Spanish Literature

Designed to parallel college-level Introduction to Hispanic Literature courses (offered at a third-year level), AP Spanish Literature courses cover representative works from the literatures of Spain and Spanish America, encompassing all genres. The courses build students' Spanish language proficiency so that they are able to read and understand moderately difficult prose and to express critical opinions and literary analyses in oral and written Spanish (an ability equivalent to having completed a third-year college-level Spanish Language course).

1205 French

See the description for 12xx, Foreign Language, substituting "French" for "Foreign Language."

1206 AP French Language

Designed to parallel third-year college-level courses in French Composition and Conversation, AP French Language courses build upon prior knowledge and develop students' ability to understand others and express themselves (in French) accurately, coherently, and fluently. Through these courses, students will develop a large enough vocabulary to understand literary texts, magazine/newspaper articles, films and television productions, and so on.

1207 AP French Literature

Designed to parallel college-level Introduction to French Literature courses (offered at a third-year level), AP French Literature courses cover representative works of French literature, and build students' French language proficiency so that they are able to read and understand moderately difficult prose and to express critical opinions and analyses in correct oral and written French. The study of literary components (such as character, theme, structure, imagery, style, tone, and so on) is an important focus of AP French Literature.

1208 Italian

See the description for 12xx, Foreign Language, substituting "Italian" for "Foreign Language."

1210 German

See the description for 12xx, Foreign Language, substituting "German" for "Foreign Language."

1211 AP German Language

Designed to parallel third-year college-level courses in German Language, AP German Language courses build upon prior knowledge and develop students' ability to understand spoken German in various conversational situations, to express themselves (in German) accurately and fluently, and to have a command of the structure of the German language. These courses will enable students to develop a large enough vocabulary to understand literature, magazine/newspaper articles, films and television productions, and so on.

1212 Portuguese

See the description for 12xx, Foreign Language, substituting "Portuguese" for "Foreign Language."

1213 Russian

See the description for 12xx, Foreign Language, substituting "Russian" for "Foreign Language."

1214 Other European languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate European language in the place of "Foreign Language."

1215 Latin

Latin courses expose students to the Latin language and culture, usually through a series of sequential courses. First-year courses emphasize basic grammar and syntax, simple vocabulary, and the influence of Latin in current English words. Students will be able to read and write in Latin on a basic level. Second-year courses enable students to expand upon what they have learned, increasing their skills and depth of knowledge. Third- and fourth-year Latin courses typically focus on having students express more complex concepts in writing, and comprehend and react to original Latin texts.

1216 AP Latin (Vergil, Catullus and Horace)

Designed to parallel advanced college-level courses in Latin studies, AP Latin courses build upon and increase knowledge of Latin, enabling students to read the language with comprehension, to accurately translate Latin into English, and to appreciate the stylistic literary techniques used by the authors. AP Latin courses also include study of the political, social, and cultural background of the literary works and their authors, as well as their influence on later literature.

1217 Greek

See the description for 12xx, Foreign Language, substituting "Greek" for "Foreign Language."

1218 Hebrew

See the description for 12xx, Foreign Language, substituting "Hebrew" for "Foreign Language."

1221 Mandarin

See the description for 12xx, Foreign Language, substituting "Mandarin" for "Foreign Language."

1222 Cantonese

See the description for 12xx, Foreign Language, substituting "Cantonese" for "Foreign Language."

1223 Japanese

See the description for 12xx, Foreign Language, substituting "Japanese" for "Foreign Language."

1224 Korean

See the description for 12xx, Foreign Language, substituting "Korean" for "Foreign Language."

1225 Vietnamese

See the description for 12xx, Foreign Language, substituting "Vietnamese" for "Foreign Language."

1226 Tagalog or other Filipino language

See the description for 12xx, Foreign Language, substituting "Tagalog" or the appropriate Filipino language for "Foreign Language."

1227 Other East Asian, Southeast Asian, or Pacific Island languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate Asian or Pacific Island language in the place of "Foreign Language."

1228 Other Asian languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate Asian language in the place of "Foreign Language." Possibilities include the languages of Iran, Iraq, Pakistan, India, and other countries in North, South, and Southwest Asia.

1231 Native American languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate Native American language in the place of "Foreign Language."

1241 African languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate African language in the place of "Foreign Language."

1251 Other languages

See the description for 12xx, Foreign Language; if this code (12xx) is used, the course should be described adequately using that description, substituting the appropriate language in the place of "Foreign Language." If the description does not adequately describe the course, use 1299: Foreign Language and Literature—Other.

1261 IB Language A (non-English)

IB Language A (non-English) courses prepare students to take the International Baccalaureate Language A exams at either the Subsidiary or Higher level. Course content includes in-depth study of literature chosen from the appropriate IB list of texts and authors, and written analyses of this literature in addition to other oral and written assignments. All course content is designed to improve students' accuracy and fluency in the language (usually the students' native tongue).

1262 IB Language B

IB Language B courses prepare students to take the International Baccalaureate Language B exams at either the Subsidiary or Higher level. Courses focus on improving students' accuracy and fluency in oral and written communication (usually in the students' "second" language). Students preparing to take the Subsidiary level exam will be able to understand native speakers; students preparing for the Higher level exam will be able to communicate fluently at native speed.

1263 IB Classical Languages

IB Classical Languages courses seek to strike a balance between the study of the language itself (structure, meaning, and formulation) and the study of the civilization it reflects (particularly its culture, philosophies, and institutions). Course content enables students to understand, translate, and appreciate a Latin, Greek, or other classical text; relate literature to its historical or social background; recognize current relevance of ancient literature; and apply acquired knowledge to other subjects.

1271 Spanish for Native Spanish Speakers

Courses in Spanish for Native Spanish Speakers support, reinforce, and expand students' knowledge of their own Spanish tongue. Because students understand at least the rudiments and structure of the language and have a working vocabulary (to a greater or lesser degree), courses in Spanish for Native Spanish Speakers often move faster than do regular Spanish courses, and may be structured similar to an English Language Arts course (with a study of literature and composition). These courses may incorporate more Spanish and Hispanic culture or history than do regular Spanish courses and may introduce translation skills.

1272 Language for Native Speakers

Courses in Language for Native Speakers support, reinforce, and expand students' knowledge of their own tongue. Because students understand at least the rudiments and structure of the language and have a working vocabulary (to a greater or lesser degree), courses in Language for Native Speakers often move faster than do regular Foreign Language courses, and may be structured similar to an English Language Arts course (with a study of literature and composition). These courses may incorporate more of the culture or history of the people than do regular Foreign Language courses and may introduce translation skills.

1281 Sign Language

Sign Language courses introduce American sign language and, as classes continue, increase students' ability to communicate with deaf persons through finger spelling, signed words, and gestures. Sign Language courses may also incorporate lessons regarding the culture of deaf people, and/or their problems and concerns.

1296 Foreign Language and Literature—Independent Study

Foreign Language and Literature—Independent Study, often conducted with instructors as mentors, allow students the opportunity to explore particular topics related to one or several foreign languages that are not offered as part of the regular curriculum.

1299 Foreign Language and Literature—Other

Graphic and Printing Communication (13)
subject fields and course descriptions

This subject area encompasses courses that concern knowledge and skills useful in the printing industry and in graphic communication occupations, including commercial art and design, graphic techniques, commercial photography, and printing technology.

Subject Fields

Occupational Program

(Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.

1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.

2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.

3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience

(Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.

1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.

2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.

3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).

4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.

5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

1300 Communication Exploration

Communication Exploration courses survey an array of topics employing graphic and technical communication, exposing students to various methods of communication such as drafting, photography, graphic arts/printing, commercial art, telecommunications, and electronic and computer-aided communication. These courses may serve as a basic introduction to the methods, tools, and techniques of these areas.

1301 Graphic Communication Exploration

Graphic Communication Exploration courses survey a range of topics using graphic communication, exposing students to many types of printing, design, and advertising career opportunities in various industries. Techniques of various communications fields may be presented, including printing, drafting, and commercial art. These courses may serve as a basic introduction to graphic communication tools and techniques.

1311 Printing Careers Exploration

Printing Careers Exploration expose students to the methods and tools of the industries using graphic arts and printing techniques. Opportunities and careers in the printing, newspaper, publishing and allied industries are explored as various topics related to the printing process are covered.

1313 Graphic Arts/Printing

Graphic Arts/Printing courses expose students to the various tools and techniques used in the printing industry. Topics typically include (but are not limited to) design, layout, paste-up, process photography, stripping, platemaking, lithography, offset press operation, and bindery. Graphics Arts/Printing courses may also include other components, such as lettering, computer graphics, or desktop publishing.

1323 Commercial Art

Commercial Art courses provide students with the opportunity to explore the use of art and design in specific industries and in business as a whole. Topics, skills, and techniques covered and refined include (but are not limited to) drawing with various media, reproduction, lettering and typography, layout and paste-up, perspective drawing, illustration, and design principles. A wide range of applications may be used, including books, brochures, packages, and school publications. The courses may also include photography, silk screen, and air brush techniques.

1333 Commercial Photography

Commercial Photography courses provide students with the opportunity to explore the application of photography in commercial enterprises and industry. Topics may include (but are not limited to) photographic techniques, composition, printmaking, and finishing.

1395 Graphic and Printing Communication—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in graphic communication, commercial arts or printing occupations; such topics may include mathematics, science, drafting, design, and so on.

1397 Graphic and Printing Communication—OJT

Through Graphic Communication—OJT courses, work experience is gained within the graphic communication, commercial arts or printing fields. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Graphic Communication—OJT experience.

1398 Graphic and Printing Communication—Co-op

Graphic Communication—Co-op courses provide work experience in the graphic communication, commercial arts or printing fields, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

1399 Graphic and Printing Communication—Other

Health and Safety Education (14)
subject fields and course descriptions

This subject area encompasses courses that concern individual health, personal safety (including safe driving and first aid skills), and community or public health.

Subject Fields

Graduation Requirement — (If the school district or state requires health credit for graduation, indicates whether this course counts toward fulfillment of that graduation requirement.)

0 - Information not collected, unavailable, or missing.
1 - This *particular* course is required for graduation.
2 - This course is one of several options that will fulfill the health graduation requirement.

Human Physiology — (Indicates whether this course includes the study of human growth and development, or human anatomy and physiology. Choose the second option if this study is conducted primarily with respect to human sexuality.)

0 - Information not collected, unavailable, or missing.
1 - This course includes study of human growth and/or physiology.
2 - This course does not include study of human growth and/or physiology.

Human Sexuality — (Indicates whether the course includes a human sexuality component.)

0 - Information not collected, unavailable, or missing.
1 - This course includes a human sexuality component.
2 - This course does not include a human sexuality component.

Code Title and Description

1401 Health Education

Topics covered within Health Education courses may vary widely, but typically include personal health (nutrition, mental health and stress management, drug/alcohol abuse prevention, disease prevention, and first aid) and consumer health issues. Brief studies of environmental health, personal development, and/or community resources may also be included.

1402 Health and Fitness

Health and Fitness courses combine the topics of Health Education courses (nutrition, stress management, abuse prevention, disease prevention, first aid, and so on) with an active fitness component (typically including aerobic activity and fitness circuits) with the intention of conveying the importance of life-long wellness habits.

1403 Community Health

Community Health courses cover not only personal health topics (nutrition, stress management, abuse prevention, disease prevention, first aid, and so on), but also more general health issues. These additional topics may include (among others) available community resources, fundamentals of the nation's health care system, contemporary world health issues, and career options within the health field.

1404 Special Needs Health Education

Special Needs Health Education courses focus on the health requirements of individuals with special needs, and emphasize meeting those needs within the home setting. Information regarding the elderly and individuals with disabilities, handicaps, and/or debilitating illnesses is provided, along with strategies to prepare students for their possible roles as caretakers.

1405 Safety and First Aid

Safety and First Aid courses provide specialized instruction in first aid techniques, cardiopulmonary resuscitation, relief of obstructed airways, and general safety procedures and behaviors. Course topics may include an overview of community agencies and hotlines providing emergency care and information.

1406 Health for Parenting Teens

Designed for pregnant teens and/or parents, topics within Health for Parenting Teens courses cover a wide range of both health and parenting issues. Prenatal and postnatal care, health and well-being of young parents, child development, stress management, and parental/adult roles are typically included. The courses may also include academic assistance, career exploration, financial management, and so on.

1407 Health and Life Management

Health and Life Management courses focus as much on consumer education topics (such as money management and evaluation of consumer information and advertising) as on personal health topics (such as nutrition, stress management, drug/alcohol abuse prevention, disease prevention, and first aid). In addition, development of decision-making, communication, interpersonal, and coping skills and strategies are included as course objectives.

1411 Drivers' Education—Classroom Only

Drivers' Education—Classroom Only courses provide students with the knowledge to become safe drivers on America's roadways. Legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs) are all included as topics of this course.

1412 Drivers' Education—Classroom and Laboratory

Drivers' Education—Classroom and Laboratory courses provide students with the knowledge and experience to become safe drivers on America's roadways. Legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs) are all included as topics of this course. Experience in driving a vehicle is an essential component of this course; students usually receive their learner's permit and/or driver's license during or as a result of this course.

1413 Health/Drivers' Education

Health/Drivers' Education courses combine topics of personal and consumer health issues with the lessons necessary to become safe drivers on America's roadways. The health education portion of the course may include topics such as nutrition, stress management, drug/alcohol abuse prevention, disease prevention, and first aid. The drivers' education component includes legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and the physical and mental factors affecting the driver's capability (including alcohol and other drugs).

1499 Health Education—Other

Note:
Courses that combine Health and Physical Education, but which have more of a physical education emphasis, might be better described by the Physical Education/Health course within the Physical Education subject area.
Some Health courses may be more adequately described within the Consumer and Homemaking Education subject area. Look particularly at the descriptions for Self Management, Family Living, and Personal Development courses.

Health Care Sciences (15)
subject fields and course descriptions

This subject area encompasses courses that concern knowledge and skills useful in the health care industry, including but not limited to procedures and technology related to nursing, dentistry, vision care, medical laboratories, and the medical clerical field.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

1501 Health Care Occupations Career Exploration

Geared for students with a possible interest in medicine or the allied health fields, Health Care Occupations Career Exploration courses expose students to the opportunities available in a variety of occupational clusters within the health care industry (such as dental care, general and administrative services, lab technology, nursing, therapy, and vision care). Experiences in several of these occupational clusters may be provided, along with information and knowledge related to the health care industry as a whole.

1502 Health Care Occupations

Health Care Occupations courses, usually offered as a series, provide orientation to and refinement of the knowledge and skills germane to the health care industry. Topics usually include (but are not limited to) an overview of health care delivery; patient care, including assessment of vital signs, body mechanics, and diet; anatomy and physiology; identification and use of medical equipment and supplies; medical terminology; hygiene and disease prevention; first aid and CPR procedures; laboratory procedures; and ethical and legal responsibilities. Clinical experiences in local health care settings are integral to the courses.

1503 Allied Health Occupations

Allied Health Occupations courses, while usually covering the same scope of topics as Health Care Occupations courses, enable students to choose one or several specialties to study in more detail. Course content depends upon the chosen field (such as physical or respiratory therapy, gerontology, medical laboratory technology, medical assisting, dental assisting, and so on).

1504 Nursing

While covering the same scope of topics as Health Care Occupations courses, Nursing courses place a special emphasis on the particular competencies required of nurses and/or nursing assistants and aides. Topics may include normal growth and development; bathing, feeding, dressing, and transporting patients; basic pharmacology; doctor, nurse, patient relationships and roles; medical and professional ethics; death and dying; and care of various kinds of patients (chronically ill, medical-surgical, children, new mothers, and so on).

1505 Nursing—LPN

Covering the same scope of topics as Nursing, Nursing—LPN courses delve into more detail, in order to prepare students to stand for the state's practical nurse licensing examination. Nursing—LPN courses provide the knowledge and experience needed for nursing care of patients of all ages, in various stages of sickness or health, and with a variety of disease conditions. Additional topics may include community health, nutrition, drug therapy and administration, and mental illness.

1506 Home Health Care

Home Health Care courses provide instruction in the care of individuals within their homes. Course content relates health care practices and procedures to the home environment, and typically includes patient care, comfort, and safety; anatomy and physiology; disease and infection prevention; nutrition and meal preparation; human relations; first aid and CPR. Topics may also include therapy strategies, household management, and employability.

1513 Medical/Clerical Assisting

Medical/Clerical Assisting courses train students in the skills that combine and relate to both the medical and clerical fields. Designed for students who are interested in clerical, secretarial, or medical assistant occupations within the health care industry, these courses develop skills in patient exam preparation, assessment of vital signs, routine lab procedures, medical transcription, medical insurance, financial accounting, and recordkeeping.

1514 Medical Office

Medical Office courses expose students to skills that combine and relate to both the medical and clerical fields. Designed for students who are interested in clerical/transcription occupations within the health care industry, these courses may include (but are not limited to) topics such as medical transcription, medical insurance, financial accounting, scheduling, and patient recordkeeping. Medical terminology and routine medical procedures are covered to provide context for clerical duties.

1515 Medical Lab Technology

Medical Lab Technology courses provide students with the background and skills necessary for employment in health care-related laboratories. Topics usually include anatomy and physiology; microbiology; chemistry; and laboratory techniques (including preparation and analysis of various cultures and specimens). Venipuncture, EKG, and CPR procedures may be included as course components.

1516 EKG Technology

EKG Technology courses offer students the knowledge and skills to perform electrocardiograph activities within the health care field. EKG Technology courses emphasize the cardiovascular system (function, diseases, and rhythms); EKG machinery; and the use of drugs and their effects. However, these courses usually include general health care topics as well, such as basic anatomy and physiology; patient care; first aid and CPR; identification and use of medical equipment; medical terminology; and human relations.

1517 Emergency Medical Technology

Typically covering the same scope of topics as Health Care Occupations courses, Emergency Medical Technology courses place a special emphasis on the knowledge and skills needed in medical emergency situations. Topics may include methods for lifting and transporting injured persons, controlling bleeding, stabilizing fractures, clearing airway obstructions, and responding to cardiac arrest.

1518 Surgical Technology

Typically covering the same scope of topics as Health Care Occupations courses, Surgical Technology courses particularly emphasize assisting patients who have undergone surgical procedures. In keeping with that focus, topics include operation room materials, tools, and procedures; aseptic surgical technique; preparation and handling of surgical instruments; efficiency in the operating room; and the roles of various medical personnel present during surgery.

1519 Central Service Technology

Central Service Technology courses provide students with the knowledge and skills related to the procurement, handling, storage, and distribution of sterile goods and equipment. Course components may include quality assurance; infection control and isolation techniques; medical terminology and processes; decontamination and sterilization; and anatomy, physiology, microbiology, and chemistry.

1523 Dental Assisting

Dental Assisting courses expose students to the tools, terminology, and procedures necessary for a career in the dental industry (usually as a dental assistant). Course content covers a wide range of topics and typically includes dental anatomy and terminology; identification and use of dental equipment; dental pathologies and procedures; asepsis; dental laboratory procedures; emergency first aid; and the ethical and legal responsibilities of dental care workers. Dental specialties and career options are often explored.

1524 Dental Laboratory Technology

Dental Laboratory Technology courses expose students to the tools, terminology, and procedures necessary for a career in a dental laboratory. Dental Laboratory Technology courses generally cover the same scope of topics as Dental Assisting courses, but emphasize experience in making mouth guards, taking impressions, creating various types of dental molds and models, and fabricating prostheses and dental appliances.

1533 Vision Care Assisting

Vision Care Assisting courses expose students to the tools, terminology, and procedures necessary for a career in the optometric or optic field. Vision Care Assisting courses typically include the physics of light and refraction; the anatomy, physiology, and terminology associated with the eyes; identification and use of optometric and/or optical equipment; optical procedures; human relations; and the ethical and legal responsibilities of vision care workers.

1595 Health Care Sciences—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in health care occupations; such topics may include mathematics, science, and/or communications.

1596 Health Care Sciences—Independent Study

Health Care Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore health-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular specialization, to explore a topic of special interest within a health-related industry, or to develop more advanced skills.

1597 Health Care Sciences—OJT

Through Health Care Sciences—OJT courses, work experience is gained within the health care industry. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Health Care Sciences—OJT experience.

1598 Health Care Sciences—Co-op

Health Care Sciences—Co-op courses provide work experience in the health care industry, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

1599 Health Care Sciences—Other

Industrial/Technology Education (16)
subject fields and course descriptions

This subject area encompasses courses that concern general workplace skills, occupational preparation, and non-specific work experience, on-the-job training, and cooperative programs. Courses that develop a general familiarity with industrial materials and processes are included here, as are courses that examine new and emergent technologies. Lastly, technical or industrial courses that did not readily fit into other subject areas are also included here.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

1603 Career Exploration

Career Exploration courses help students identify and evaluate personal goals, priorities, aptitudes, and interests in the pursuit of effective career decision making. Career Exploration courses expose students to various sources of information on career and training options, and may also enable students to understand the implications of technological and economic changes on the labor market. These courses may also include the development of job search and employability skills.

1604 Employability Skills

Like Career Exploration courses, Employability Skills courses also help students match their interests and aptitudes to career options. However, the focus of Employability Skills courses is placed on sources of employment information, job seeking and interview techniques, applications and resumes, and the skills needed to remain and advance within the workplace. Course content may also include consumer education and personal money management topics.

1605 Diversified Occupations

Diversified Occupations courses help students enter the work force through career exploration, job search and application, and by developing positive work attitudes and work-related skills. Career planning and selection, money management, communication skills, interpersonal business relationships and behavior, and personal responsibility are typical topics covered in diversified occupations courses. Employment may be a required component of this course, or students may be required to enroll concurrently in a work experience course.

1606 Work Experience

Work Experience courses provide general work experience, and emphasize career guidance, job search, application, and employability skills (including refining academic and job skills and developing positive work attitudes). Students are employed, but their employment is not necessarily related to a particular vocational program or course of study.

1607 OJT—Non-specified Program

OJT—Non-specified Program courses enable students to gain on-the-job work experience in a field related to their vocational program or course of study. Goals of the OJT experience are typically set cooperatively by the student, teacher, and employer, although actual classroom attendance/experience is not an integral component of the OJT course. *Note: if the particular subject area is known, use the code associated with the OJT course within that subject area; if the particular subject area is unknown but the work experience relates to industry or technology, use the code below (Industrial/Technology Education—OJT).*

1608 Co-op—Non-specified Program

Co-op—Non-specified Program courses enable students to gain work experience in a field related to their vocational program or course of study. Unlike OJT courses, Co-op courses are supported by classroom attendance and discussion; classroom experience may involve further study in the field, improvement of employability skills, money and resource management, or discussion regarding the experiences and problems encountered on the job. Both performance reviews and class assignments are usually integral to the co-op experience. *Note: if the particular subject area is known, use the code associated with the Co-op course within that subject area; if the particular subject area is unknown but the work experience relates to industry or technology, use the code below (Industrial/Technology Education—Co-op).*

1611 General Industrial Arts

General Industrial Arts courses expose students to the tools and machines that may be encountered in manufacturing-related occupations and enable students to develop the manual skills to use these tools in a variety of applications. The courses may also explore the technology used in manufacturing products, transporting goods and people, effective communication, and efficient energy conversion. Topics may include (but are not limited to) drawing and planning, electricity, graphic arts, woodwork, leatherwork, metalwork, plastics, and power technology. Typically, general safety and career exploration are also covered.

1612 Materials and Processes

Similar to General Industrial Arts courses in that they expose students to the tools and machines that may be encountered in manufacturing-related occupations, Materials and Processes courses relate this exposure particularly to the analysis, testing, and processing of metals, plastics, woods, ceramics, and composite materials.

1613 Metal and Wood Technology

These courses include studying the properties of metals, woods, and composites, and using these materials to construct usable products. Metal and Wood Technology courses enable the student to experience the process of translating an idea into a finished product, with instruction in planning, designing, selecting materials, and using tools and machines.

1614 Industrial Safety/First Aid

Industrial Safety/First Aid courses provide instruction in safe operating procedures related to various trades, as well as more general training in emergency first aid and CPR. Course topics may include the importance of standard operation procedures, agencies and regulations related to occupational safety and hazard prevention, and the dangers of particular materials.

1623 Production Systems

Production Systems courses introduce students to the concepts of manufacturing technologies, from conception through production. Although courses vary, students typically analyze markets, design and develop prototypes, plan a marketing or sales strategy, manage a production plan, and manufacture useful products. The evolution and impact of technology on society's social, cultural, and economic systems and institutions may also be explored.

1624 Manufacturing Systems

Manufacturing Systems courses introduce students in a general fashion to the manner in which materials are processed and transformed using various methods. Processing techniques covered may include casting, forming, separating, assembling, and finishing. The courses may also include an overview of management techniques in planning, organizing, and controlling various segments of the manufacturing process, including design, engineering, production, and marketing. Students may organize a "company" and create products for sale.

1625 Technology Systems

Technology Systems courses enable students to explore the resources, processes, management, and products as they relate to communication, energy, and production technology. The practical application and impact of technology are emphasized.

1626 Emergent Technologies

Emergent Technologies courses expose students to the new technologies that affect our industrial society. A wide range of technologies may be covered, but examples include lasers, fiber optics, electronics, robotics, computer technologies (artificial intelligence, computer-aided design and/or machining, and so on), and audiovisual communications.

1627 Research and Development

Research and Development courses provide students with the opportunity to focus on one or more areas of industrial technology, creatively pursuing new knowledge or solving a technological problem, by designing and building prototypes and working models. Appropriate information is learned and applied in order to complete a project.

1633 Appliance Repair

Appliance Repair courses provide students with the knowledge and experience to repair, install, and service appliances such as stoves, refrigerators, washers, dryers, air conditioners, water heaters, and so on. Students gain an understanding of the mechanics and working systems of these appliances, the skills to read blueprints and specifications; and proficiency in using related tools and products.

1634 Equipment Maintenance and Repair

Equipment Maintenance and Repair courses prepare students to adjust, maintain, replace and repair parts of machinery and to repair tools, equipment, and machines. The courses may have a general emphasis or may focus on a specific type of machinery or on equipment related to a particular industry. Depending upon the intent, course topics may include electric, hydraulic, or mechanic systems; control devices, valves, and gates; or supplemental equipment such as fans, hoses, and pipes.

1643 Upholstery

Upholstery courses expose students to the tools, materials, and techniques used to fit and repair furniture with material coverings, padding, fillers, and springs. Course content includes selection of furniture and fabric; design and construction of upholstery projects; and finishing and trimming furniture.

1695 Industrial/Technology Education—Related Subjects

Industrial/Technology Education—Related Subjects courses provide skills and knowledge necessary or useful for particular occupations or technologies within an industrial or technological field. Particular topics and skills, or their applications, covered in these courses may vary with the occupation or technology.

1696 Industrial/Technology Education—Independent Study

Industrial/Technology Education—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within one of the fields related to industry or technology.

1697 Industrial/Technology Education—OJT

Through Industrial/Technology Education—OJT, work experience is gained in an industrial or technological field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Industrial/Technology Education—OJT experience.

1698 Industrial/Technology Education—Co-op

Industrial/Technology Education—Co-op courses provide work experience in an industrial or technological field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study of the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

1699 Industrial/Technology Education—Other

Life and Physical Sciences (17)
subject fields and course descriptions

This subject area encompasses courses that concern bodies of knowledge natural world and its phenomena, including the study of living organisms and life processes as well an non-living materials and the laws that govern them.

Subject Fields

Type of Credit

(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.
1 - Science credit
2 - (Not a valid choice)
3 - Social studies credit
4 - Fine Arts/Humanities credit
5 - Vocational credit
6 - Dual credit (in Science and another subject area)
7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8 - Other type of credit
9 - Elective credit

Lab Experience

(Indicates the participatory, hands-on laboratory experience received by students. If possible, use the higher codes to indicate the frequency of laboratory experimentation.)

0 - Information not collected, unavailable, or missing.
1 - Regular laboratory experiments are integral to the course.
2 - Laboratory experimentation is not required nor integral.
3 - Less than 50 percent of the course is spent on laboratory experiments.
4 - About 50 percent of the course is spent on laboratory experiments.
5 - More than 50 percent of the course is spent on laboratory experiments.

Level of Math

(Indicates the level of math used within the course.)

0 - Information not collected, unavailable, or missing.
1 - No math
2 - Basic computational skills (addition, subtraction, multiplication, division)
3 - Algebraic skills or higher level math

Code Title and Description

1701 Earth Science

Earth science courses offer insight into the environment on earth and the earth's environment in space. While teaching the concepts and principles essential to an understanding of the dynamics and history of the earth, the following topics may be explored: oceanography, geology, astronomy, meteorology, and geography.

1702 Geology

Geology courses provide an in-depth study of the forces that formed and continue to affect the earth's surface. Earthquakes, volcanoes, and erosion are examples of topics that are presented.

1703 Physical Science

Physical Science courses involve the study of the structures and states of matter. Typically (but not always) an introductory survey course, topics covered may include forms of energy, wave phenomenon, electromagnetism, and physical and chemical interactions.

1704 IB Physical Science

IB Physical Science courses prepare students to take the International Baccalaureate Physical Science exams at either the Subsidiary or Higher level. These courses integrate the study of physics and chemistry, showing how the physical and chemical properties of materials can be explained and predicted in terms of atomic, molecular, and crystal structures and forces. In keeping with the general aim of IB Experimental Sciences courses, IB Physical Science promotes critical analysis, prediction, and application of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of science and scientific advances upon society and upon issues of ethical, philosophical and political importance. Students are required to develop and pursue an individual, experimental project, which is evaluated as part of the IB exam.

1711 Biology—First Year

Biology—First-Year courses are designed to provide information regarding the fundamental concepts of life and life processes. Topics covered include (but are not restricted to) cell structure and function, general plant and animal physiology, genetics, and taxonomy.

1712 Biology—Advanced Studies

Usually taken after Biology—First-Year courses, Biology—Advanced Studies courses cover biological systems in more detail. Topics that may be explored include cell organization, function, and reproduction; energy transformation; human anatomy and physiology; and organisms' evolution and adaptation. These concepts are often studied on a college level.

1713 Anatomy and Physiology

Usually taken after Biology—First-Year courses, Anatomy and Physiology courses present the human body and biological systems in more detail. In order to understand the structure of the human body and its functions, students learn anatomical terminology, study cells and tissues, explore functional systems (skeletal, muscular, circulatory, respiratory, digestive, reproductive, nervous, and so on), and may dissect mammals.

1714 Biology—Specific Topics

Biology—Specific Topics courses are typically offered (but not restricted) to students who have mastered the concepts covered in Biology—First-Year courses. These courses examine biological systems in more detail, concentrating on a particular subtopic (such as botany, zoology, microbiology, genetics, and so on). These concepts are often studied on a college level.

1715 AP Biology

Typically taken after a year of high school biology and chemistry and designed to parallel college-level introductory biology courses, AP Biology courses stress basic facts and their synthesis into major biological concepts and themes. Three general areas are covered: molecules and cells (including biological chemistry and energy transformation); genetics and evolution; and organisms and populations (i.e., taxonomy, plants, animals, and ecology). AP Biology courses include college-level laboratory experiments.

1716 IB Biology

IB Biology courses prepare students to take the International Baccalaureate Biology exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Biology promotes understanding of the facts, principles, and concepts underlying the biological field, critical analysis, evaluation, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of biology and scientific advances in biology upon society and upon issues of ethical, philosophical and political importance. IB course content varies, but includes study of living organisms from the cellular level through functioning entities within the biosphere. Laboratory experimentation is an essential component of this course.

1721 Chemistry—First Year

Chemistry—First-Year courses involve the composition, properties, and reactions of substances. The behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure are typical concepts explored in Chemistry—First-Year courses. Chemical formulas and equations and nuclear reactions are also studied.

1722 Chemistry in the Community

Developed by the American Chemical Society, Chemistry in the Community is an interdisciplinary chemistry course designed for students who desire an understanding of chemical concepts and applications but who do not plan to pursue science-based careers.

1723 Chemistry—Advanced Studies

Usually taken after Chemistry—First-Year courses, Chemistry—Advanced Studies courses cover chemical properties and interactions in more detail. Often offered as a college-level course, advanced chemistry topics include organic chemistry, thermodynamics, electrochemistry, macromolecules, kinetic theory, and nuclear chemistry.

1724 Chemistry—Specific Topics

Chemistry—Specific Topics courses are typically offered (but not restricted) to students who have mastered the concepts presented in Chemistry—First-Year courses. These courses cover chemical principles and reactions in more detail, concentrating on a particular subtopic such as organic chemistry, chromatography and spectrometry, physical chemistry, and so on. These concepts are often studied on a college level.

1725 AP Chemistry

Designed to parallel college-level general chemistry courses, AP Chemistry courses usually follow high school chemistry and second-year algebra. AP Chemistry courses require more time, effort, and formulation from students than regular secondary chemistry courses. Topics may include atomic theory and structure; chemical bonding; nuclear chemistry; states of matter; and reactions (stoichiometry, equilibrium, kinetics, and thermodynamics). AP Chemistry laboratories are equivalent to those of typical college courses.

1726 IB Chemistry

IB Chemistry courses prepare students to take the International Baccalaureate Chemistry exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Chemistry promotes understanding of the facts, patterns, and principles underlying the field of chemistry; critical analysis, evaluation, prediction, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of chemistry and scientific advances in chemistry upon society and upon issues of ethical, philosophical and political importance. Course content varies, but includes the study of the materials of the environment, their properties, and their interaction. Laboratory experimentation is essential.

1731 Physics—First Year

Physics—First-Year courses involve the study of the forces and laws of nature affecting matter: equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light, magnetic, and electric phenomenon.

1732 Principles of Technology

Principles of Technology courses, designed by CORD and AIT, focus on the study of the forces and laws of nature and their application to modern technology. Equilibrium, motion, momentum, energy conversion, electromagnetism, and optical phenomenon are presented in the context of current, real-world applications. Demonstrations, math labs, and applied laboratory experiments are an integral part of the Principles of Technology curriculum. These courses enable students to gain a solid foundation for careers in electronics, robotics, telecommunications, and other technological fields.

1733 Physics—Advanced Studies

Usually taken after Physics—First-Year courses, Physics—Advanced Studies courses provide instruction in laws of conservation, thermodynamics, and kinetics; wave and particle phenomena; electromagnetic fields; and fluid dynamics. Physics—Advanced Studies courses are usually offered as a college-level study of the field of physics.

1734 Physics—Specific Topics

Physics—Specific Topics courses are typically offered (but not restricted) to students who have mastered the concepts covered in Physics—First-Year courses. These courses present the principles of matter and energy in more detail, concentrating on a particular subtopic such as optics, thermodynamics, quantum physics, and so on. These concepts are often studied on a college level.

1735 AP Physics B

AP Physics B courses are designed to parallel college-level physics courses that provide a systematic introduction to the main principles of physics and emphasize problem-solving without calculus. Course content includes the following areas: mechanics; electricity and magnetism; modern physics; waves and optics; and kinetic theory and thermodynamics.

1736 AP Physics C

Designed to parallel college-level physics courses that serve as a partial foundation for science or engineering majors, AP Physics C courses primarily focus on mechanics, and electricity and magnetism, with approximately equal emphasis on these two areas. AP Physics C courses are more intensive and analytic than AP Physics B courses, and require the use of calculus to solve the problems posed.

1737 IB Physics

IB Physics courses prepare students to take the International Baccalaureate Physics exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Physics promotes understanding of the facts, patterns, and principles underlying the field of physics; critical analysis, prediction, and application of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of physics and scientific advances in physics upon society and upon issues of ethical, philosophical and political importance. Course content varies, but includes the study of the fundamental laws of nature and the interaction between concepts of matter, fields, waves, and energy. Laboratory experimentation is essential; calculus may be used in some courses.

1741 Integrated Science

The specific content of Integrated Science courses varies, but emanates from suggestions made by the American Association for the Advancement of Science (AAAS) and the National Association for the Advancement of Science. Typically a multi-year program of study, Integrated Science courses draw from the principles of several scientific specialties—earth science, physical science, biology, chemistry, and physics—and organize the material around thematic units. Common themes include systems, models, energy, patterns, change, and constancy. Appropriate aspects from each specialty are used to investigate applications of the theme.

1742 Unified Science

Unified Science courses combine more than one branch of science into a cohesive study, or may integrate science with another discipline. General scientific concepts are explored, as are the principles underlying the scientific method and the techniques of experimentation.

1743 Applied Biology/Chemistry—CORD

Applied Biology/Chemistry—CORD courses integrate biology and chemistry into a unified domain for study, and presents the resulting body of knowledge in the context of work, home, society and the environment, emphasizing field and laboratory activities. Topics include natural resources, water, air and other gases, nutrition, disease and wellness, plant growth and reproduction, life processes, microorganisms, synthetic materials, waste and waste management, and the community of life.

1751 Environmental Science

Environmental Science courses examine the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, the following subjects may be covered: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.

1761 Astronomy

Astronomy courses offer the opportunity to study the solar system, stars, galaxies, and interstellar bodies; astronomic instruments are usually introduced and used in the course of this study. Theories regarding the origin and evolution of the universe, space, and time might also be explored.

1771 Marine Science

Courses in Marine Science focus on the ocean's content, features, and possibilities. Marine organisms, conditions, and ecology are explored; marine mining, farming, and exploration may be studied.

1781 Science Technology/Engineering

Science Technology/Engineering courses offer the opportunity to approach practical, technological problems and to use scientific, experimental skills and processes to reach solutions. Students may use a theoretical framework, or may develop prototypes and working models.

1782 Origins of Science

Origins of Science courses explore the body of scientific knowledge and discoveries from an historical perspective, wherein students gain an understanding of how one discovery led to others or to entire revolutions of thought. Original experiments may be replicated, and primary materials may be studied.

1793 Life and Physical Sciences Lab Assistant

Life and Physical Sciences Laboratory Assistant courses offer interested students the opportunity to assist in the preparation and organization of laboratory materials. Safety techniques and the care of equipment are emphasized.

1796 Life and Physical Sciences—Independent Study

Life and Physical Sciences—Independent Study courses, often conducted with instructors as mentors, enable students to explore scientific topics of interest, using advanced methods of scientific inquiry and experimentation. These courses may be offered in conjunction with other rigorous science courses, or may serve as an opportunity to explore a topic of special interest.

1799 Life and Physical Sciences—Other

Marketing (18)
subject fields and course descriptions

This subject area encompasses courses that concern the movement of consumer goods from manufacturer to the public, including purchasing processes, distribution systems, warehouse operations, retail transactions, and sales techniques.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

1801 Marketing Career Exploration

Geared for students with a possible interest in marketing, sales, or small business operation, Marketing Career Exploration courses expose students to the opportunities available in retail, wholesale, advertising, and other occupational fields using marketing principles.

1802 Marketing—General

Marketing—General courses focus on the wide range of factors that influence the flow of goods and services from the producer to the consumer. Usually offered as a series, Marketing—General courses include a variety of topics related to providing goods and services, such as market research, the purchasing process, distribution systems, warehouse and inventory control, salesmanship, sales promotions, shoplifting and theft control, business management and entrepreneurship. Human relations, computers, and economics are often covered as well. Job and career exploration are often an integral emphasis of Marketing—General courses.

1803 Marketing—Fashion

Marketing—Fashion courses typically cover the same scope of topics as Marketing—General courses (purchasing and distribution systems; advertising, display and sales; management and entrepreneurship, and so on), but do so with particular attention to the fashion industry. In keeping with the focus on the fashion industry, course topics may also include fashion cycles, fashion history, design, and the development of fashion style and coordination.

1804 Marketing—Real Estate

Marketing—Real Estate courses typically cover the same scope of topics as Marketing—General courses (purchasing; advertising, sales; human relations, management and entrepreneurship, and so on), but do so with particular attention to the real estate industry. In keeping with the focus on real estate, course topics may also include financing, investment, ownership rights, ethics, and other real estate principles. Students successfully completing some courses may be eligible to take the state real estate licensing exam.

1805 Marketing—Transportation

Marketing—Transportation courses typically cover the same scope of topics as Marketing—General courses (purchasing and distribution systems; advertising, display and sales; management and entrepreneurship, and so on), but do so with particular attention to the transportation industry. In keeping with the focus on this industry, course topics may also include identification and proper use of auto parts and accessories.

1806 Marketing—Other Specialization

These marketing courses typically cover the same scope of topics as Marketing—General courses (purchasing and distribution systems; advertising, display and sales; management and entrepreneurship, and so on), but do so with attention to a particular industry not specified above. The course may also cover specific topics related to the particular industry being covered.

1813 Warehouse Operations

Warehouse Operations courses present marketing principles and concepts related to the receipt, storage, and distribution of goods. Course topics typically include inventory control, warehouse security, purchasing and distribution systems, and safety. Warehouse Operations courses may also include other marketing principles and concepts.

1814 Retail Marketing

Retail Marketing courses cover marketing principles and concepts related to the provision of goods or services directly to the consumer, emphasizing store operation, advertisement and display of goods, store security, human relations, and business management and ownership.

1815 Cashier/Checker Operations

Cashier/Checker Operations courses provide students with the knowledge and skills to operate a cash register and to handle numerous transactions. Topics typically include cash register procedures; handling cash, credit, checks, food stamps, and other forms of tender; human relations; stocking and marking merchandise; and theft prevention. Job search and employability skills are often an integral part of the course.

1823 Principles of Marketing

Principles of Marketing courses offer students insight into the processes affecting the flow of goods and services from the producer to the consumer. Course content may range considerably as general marketing principles such as purchasing, distribution, and sales are covered; however, a major emphasis is often placed on kinds of markets; market identification; product planning, packaging, and pricing; and business management.

1824 Principles of Advertising

Principles of Advertising courses expose students to the varied concepts underlying the promotion of products. The topics included in Principles of Advertising courses range considerably, but may include the psychology of advertising, a study of various media, advertising planning and budgeting, and advertising layout and design principles. The course topics may also include an overview of commercial art and packaging.

1825 Principles of Selling

Principles of Selling courses provide students with the knowledge and opportunity to develop in-depth sales competencies. Types of selling, steps in a sale, sales strategies, and skills and techniques in the area of sales may all be topics of these courses.

1826 Marketing Management

Marketing Management courses typically cover the same scope of topics as Marketing—General courses (purchasing and distribution systems; advertising and sales; and so on) but place a particular emphasis on business management and entrepreneurship, providing exposure to common techniques and problems of management.

1896 Marketing—Independent Study

Marketing—Independent Study courses, often conducted with instructors as mentors, enable students to explore marketing-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular industry application, to explore a topic of special interest within a related industry, or to develop greater marketing skills.

1897 Marketing—OJT

Through Marketing—OJT courses, work experience is gained in marketing-related careers in one of several industries. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Marketing—OJT experience.

1898 Marketing—Co-op

Marketing—Co-op courses provide work experience in marketing careers, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

1899 Marketing—Other

Mass Communication (19)
subject fields and course descriptions

This subject area encompasses courses that concern the study or use of mediums that transmit messages, information, and cultural values to a large audience (such as television, radio, publications, film, and photography).

Subject Fields

Emphasis/Type of Credit (Indicates the primary thrust or emphasis of the course by indicating the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.

1 - Primary English credit
(The course has a strong English/Language arts emphasis; completion of the course counts towards primary language arts credit fulfillment.)

2 - Secondary English credit
(The course has an English/Language arts emphasis, but it is not strong enough to apply toward fulfillment of a primary English/ language arts graduation requirement; instead, it will fulfill a general or secondary language arts elective requirement.)

3 - Social studies credit

4 - Fine Arts/Humanities credit

5 - Vocational credit

6 - Dual credit (in two different subject areas)

7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)

8 - Other type of credit

9 - Elective credit

(Subject Fields continued on next page)

Subject Fields, continued

Focus

(Indicates the publication or medium upon which the course focuses.)

0 - Information not collected, unavailable, or missing.
1 - Newspaper
2 - Single publication other than the newspaper (Yearbook, Literary Magazine, School Magazine, etc.)
3 - Publication combination (combined focus on newspaper, yearbook, literary magazine, and/or other forms)
4 - Television/Video
5 - Radio
6 - Non-print combination (television, radio, film, video, etc.)
7 - Mixed media (print journalism, TV, radio, video, photography)
8 - Other

Production

(Indicates whether students are required to create a product [such as a video or radio segment] or to be part of a production team [such as the newspaper or yearbook staff])

0 - Information not collected, unavailable, or missing.
1 - Product or membership in production staff is required.
2 - Production is strongly encouraged but not required, or required only where the facilities and opportunities exist.
3 - No product nor production staff membership is required (beyond classroom assignments and exercises).

Code Title and Description

1902 Journalism

Journalism courses are typically associated with the production of a school newspaper, yearbook, or literary magazine; therefore, they not only emphasize writing style and technique, but also production values and organization. Beginning journalism courses introduce students to the concepts of newsworthiness and press responsibility; develop students' skills in writing and editing stories, headlines, and captions; and teach students the basics of production design, layout, and printing of a publication. Advanced students learn and practice more refined journalistic techniques, participate to a greater extent in the formation and/or management of the production team, and gain experience in critical evaluation of story content and the publication as a whole. Photography and photojournalism skills may be included.

1911 Mass Media—Production

Mass Media—Production courses provide the technical knowledge and skills necessary for television, video, film, and/or radio production. Writing scripts, camera operation, use of graphics and other visuals, lighting, audio techniques, editing, production principles, and career opportunities are typical topics covered within Mass Media—Production courses. Students are usually required to produce their own program or segment. Additional topics such as broadcast industry regulations, radio/TV operation, power of the medium, photography, transmission technology, and so on may be included.

1921 Mass Media—Communication

Mass Media—Communication courses enable students to understand and critically evaluate the role of media in society. Course content typically includes investigation of visual images, printed material, and audio segments as tools of information, entertainment, and propaganda; improvement of presentation and evaluative skills in relation to mass media; recognition of various techniques for delivery of a particular message; and, in some cases, creation of a media product. The course may concentrate on a particular medium.

1931 Photojournalism

Photojournalism courses expose students to the manner in which photography is used to convey information and experiences. Typically coordinated with production of the school newspaper or yearbook, Photojournalism courses provide students with the opportunity to improve their photo composition and film development skills, and to apply their art to journalistic endeavors.

1996 Mass Communication—Independent Study

Mass Communication—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics related to journalism and/or mass media. Emphasis may be placed either on extension of production skills and techniques, or on research of a particular topic of interest.

1999 Mass Communication—Other

Mathematics (20)
subject fields and course descriptions

This subject area encompasses courses that concern the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions; space configurations and their structure, measurement, and transformations; and the application of mathematical thought to related endeavors.

Subject Fields

Type of Credit

(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.
1 - Math credit
2 - (Not a valid option)
3 - Social studies credit
4 - Fine Arts/Humanities credit
5 - Vocational credit
6 - Dual credit (in Foreign Language and another subject area)
7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8 - Other type of credit
9 - Elective credit

(Subject Fields continued on next page)

Subject Fields, continued

Scope of the Course

(Although the course descriptions provided identify the purpose and core content that distinguishes one course from another, the range of topics covered in a single mathematics course varies considerably. Indicates whether the course devotes a significant portion of the course objectives to topics that might be found in either a lower or higher level course, using the following codes.)

0 - Information not collected, unavailable, or missing.
1 - The course devotes 25 percent or more of its time or objectives to a study of the "review" topics that are identified at the end of each course description.
2 - The course devotes 25 percent or more of its time or objectives to a study of the "enhancement" topics that are identified at the end of each course description.
3 - The course does not devote 25 percent or more of its time or objectives to either the review or enhancement topics.

Calculator/Computer Use

(Indicates whether the course objectives place strong emphasis on the use of a calculator and/or computer throughout the course.)

0 - Information not collected, unavailable, or missing.
1 - Use of a calculator is strongly encouraged.
2 - Use of a computer is strongly encouraged.
3 - Use of both calculators and computers is strongly encouraged.

Courses within the Mathematics subject area are divided roughly into six groups: Integrated Mathematics courses; General Mathematics courses; Pre-Algebra and Pre-Geometry courses; Algebra I and Geometry level courses; Advanced Math level courses; and Specialized Topics.

The general mathematics courses correspond to the Review Mathematics category developed by the Council of Chief State School Officers' Science and Mathematics Indicators Project; Pre-Algebra and Pre-Geometry courses correspond to the Informal Mathematics category; Algebra I and Geometry courses and higher (with the exception of some of the specialized topics courses) correspond to the Formal Mathematics category.

The courses in the Advanced Math Level category include Algebra II and courses that require Algebra II as a prerequisite and which may be used as preparation for calculus. Courses in the Specialized Topics category increase the breadth of a student's knowledge of mathematics, and introduce students to further applications of mathematics.

Note:
Several descriptions use the following phrases; their meanings are outlined here to improve the brevity of the course descriptions. *Arithmetic using rational numbers*: addition, subtraction, multiplication and division of whole numbers, fractions, decimals, and percents. *Basic geometry*: measurement systems and properties of geometric figures. *Basic statistics*: interpreting graphs, charts, and tables.

Code Title and Description

[The following course description is based upon the National Council of Teachers of Mathematics' (NCTM's) core curriculum for grades 9–12, developed in conjunction with NCTM's curriculum and evaluation standards for school mathematics.]

2001 NCTM Core Math

NCTM Core Math, a multi-year sequential program, emphasizes the teaching of mathematics as problem solving, communication, and reasoning. The courses emphasize the connections among mathematical topics and between mathematics and other disciplines.

The first year of the core curriculum focuses on patterns and properties in mathematics and includes the following units: exploring geometric figures; exploring data; graphs; expressions, sentences, and situations; models for operations; linear situations, sentences, and graphs; products and powers; properties of geometric figures; measures in geometry; introduction to probability and simulation; and introduction to functions.

The second year of the core curriculum focuses on visualizing relationships and includes the following units: variation and modeling; coordinate geometry; transformations of geometric figures; introduction to trigonometry; functions; lines, parabolas, and exponential curves; transformations of functions and data; systems; matrices; and combinatorics and binomial distributions.

The third year focuses on functions and reasoning and includes the following units: fitting curves to data; circular functions and models; exponential and logarithmic functions; logic; and reasoning in geometry, algebra, intuitive calculus, discrete mathematics, probability, and statistics.

The fourth year of the core curriculum, also called Advanced Math Core, focuses on mathematics for students who intend to go on to college. The following units are included: operating with and describing functions; functions and equations; circular functions; applications of matrices; complex numbers and polar coordinates; recursion; advanced proof ideas; rates and areas; statistical inference; and algebra and algorithms.

[The following course description describes the curriculum developed by the Interactive Mathematics Project (IMP) in California.[11] The curriculum is based on NCTM's standards for grades 9–12 and provides for 3 years of problem-based mathematics for students who intend to go on to college. The course sequence is intended to replace the traditional sequence of secondary mathematics courses. A fourth year of the curriculum is currently being developed.]

2002 Interactive Math Project

Interactive Math Project organizes the teaching of mathematics around solving substantial problems and integrates mathematics with other subject areas. The first year of the interactive curriculum is organized around five 4-week- to 7-week-long units.

The first year's units give students experience with working in groups to analyze problems, expressing mathematical ideas orally and in writing, using concrete mathematical models, carrying out investigations when the task is not clearly defined, and becoming familiar with alternative assessment techniques. Specifically, these units expose students to geometric and number patterns, the use of variables to express generalizations, linear relationships, mathematical models, systems of equations, expected value, probability, data analysis, quadratic equations, curve fitting, similarity, and trigonometric functions.

Building upon the first year, the second year's units develop symbolic representations of problems; introduce concepts of equivalent expressions equations; develop algebraic techniques and graphing; and introduce statistics, area and volume of polygons, Pythagorean theorem, scientific notation, exponents, graphing and solving systems of linear equations, linear programming, and concepts of maximization and minimization. Two week-long units are designed to improve students' writing and to develop strategies for solving problems similar to those found on the Scholastic Aptitude Test.

Third year units expose students to further concepts in probability, including permutations and combinations; binomial theorem; properties of Pascal's triangle; circles and coordinate geometry, including developing formulas for circumference, area, and midpoint of a line; growth models; concept of slope; matrices; and derivative, exponential, logarithmic, and circular functions.

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[11] The Interactive Mathematics Project was sponsored jointly by the U.S. Department of Education, California State Department of Education, California Postsecondary Education Commission, National Science Foundation, San Francisco State University, EQUALS of the Lawrence Hall of Science, and the Berkeley, San Francisco, and Tracy Unified School Districts.

[In response to the publication of NCTM's standards for mathematics education, a number of states, districts, and schools nationwide have developed or are in the process of developing their own integrated mathematics courses for high school students. While these courses address NCTM concerns for reforming mathematics education, they do so in a variety of ways, and do not necessarily follow either the NCTM core curriculum or Interactive Mathematics Project curriculum. The following two course descriptions are provided to identify these courses.]

2003 Integrated Math

Integrated Math courses emphasize the teaching of mathematics as problem solving, communication, and reasoning, and emphasize the connections among mathematical topics and between mathematics and other disciplines. The three-year sequence of Integrated Math replaces the traditional Algebra I, Geometry, Algebra II sequence of courses, and usually covers the following topics during the three-year sequence: algebra, functions, geometry from both a synthetic and an algebraic perspective, trigonometry, statistics and probability, discrete mathematics, the conceptual underpinnings of calculus, and mathematical structure.

2004 Informal Math—Integrated Approach

Informal Math—Integrated Approach courses emphasize the teaching of mathematics as problem solving, communication, and reasoning, and highlight the connections among mathematical topics and between mathematics and other disciplines. Unlike the three-year sequence of Integrated Math, which replaces the traditional Algebra I, Geometry, Algebra II sequence, these courses apply a problem-solving approach to the teaching of general math, pre-algebra, and pre-geometry topics. Emphasis is on the use of numbers to analyze real world problems, estimation, algebraic and geometric concepts and relationships, and mathematical models.

2011 Resource Center Math

Taught in a resource center or laboratory setting where the emphasis is on individual student progress, Resource Center Math includes the study of general math topics, such as arithmetic using rational numbers, numeration systems and place value, basic geometry, and basic statistics. These courses also apply these skills to real world problems and situations.

2012 Basic Math

Basic Math courses emphasize attainment of basic math skills for students who have not yet mastered these skills. Basic Math includes the study of general math topics: arithmetic using rational numbers, numeration systems and place value, basic geometry, basic statistics, and application of these skills to real world problems and situations.

Enhancement topics: area, perimeter, and volume of geometric figures, ratio and proportion, estimation, and formulas.

2013 General Math

General Math courses reinforce basic math skills for students who have previously attained them, and extend these skills to further applications and concepts. General Math includes the study of general math topics, such as arithmetic using rational numbers, basic geometry, basic statistics, and application of these skills to real world problems and situations.

Enhancement topics: area, perimeter, and volume of geometric figures, congruence and similarity, angle relationships, the Pythagorean theorem, the rectangular coordinate system, sets and logic, ratio and proportion, estimation, formulas, solving and graphing simple equations and inequalities (i.e., linear equations in one variable), and operations with real numbers.

2014 Consumer Math—General Math level

Consumer Math—General Math level courses reinforce general math skills for students who have previously attained them, may extend the general math skills to cover additional math concepts, and use these skills in a variety of consumer applications. In addition to reinforcing general math topics, such as arithmetic using rational numbers, measurement, and basic statistics, these courses apply these skills to consumer problems and situations. Applications may include budgeting, taxation, credit, banking services, insurance, buying and selling products and services, home and/or car ownership and rental, managing personal income, and investment.

Enhancement topics: ratio and proportion, further statistical concepts (i.e., measures of central tendency), and basic probability theory.

2015 Applied Math—General Focus

These courses reinforce general math skills for students who have previously attained them, may extend these skills to include some pre-algebra and algebra topics, and use these skills in a wide variety of practical, consumer, business, and occupational applications. Applied Math—General Focus courses reinforce general mathematics topics, such as arithmetic using rational numbers, measurement, and basic statistics.

Enhancement topics: ratio and proportion, exponents and radicals, area, perimeter, and volume of geometric figures, formulas, and simple equations.

2016 Applied Math—Occupational Focus

These courses reinforce general math skills for students who have previously attained them, may extend these skills to include some pre-algebra and algebra topics, and use these skills primarily in a variety of occupational applications. Applied Math—Occupational Focus courses reinforce general mathematics topics, such as arithmetic using rational numbers, measurement, and basic statistics.

Enhancement topics: ratio and proportion, exponents and radicals, area, perimeter, and volume of geometric figures, formulas, and simple equations.

2021 Pre-Algebra

Pre-Algebra courses are generally intended to provide an extra year of study for students who have attained general mathematics objectives but are not yet ready to enter Algebra I. Pre-Algebra covers a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities.

Review topics: arithmetic using rational numbers, basic geometry, and basic statistics.

Enhancement topics: operations involving real numbers, evaluating rational algebraic expressions, graphing first-degree equations and inequalities, translating word problems into equations, polynomial operations and factorization, and solving simple quadratics.

2022 Principles of Algebra and Geometry

Providing additional preparation for Algebra I, Principles of Algebra and Geometry courses combine the study of some pre-algebra and algebra topics with introductory geometry topics. These courses include the study of formulas, algebraic expressions, first degree equations and inequalities, the rectangular coordinate system, area, perimeter, and volume of geometric figures, and properties of triangles and circles.

Review topics: arithmetic using rational numbers, measurement systems, and basic statistics.

Enhancement topics: operations involving real numbers, evaluating rational algebraic expressions, graphing first degree equations and inequalities, translating word problems into equations, operations with and factoring of polynomials, and solving simple quadratics.

2023 Informal Geometry

Informal Geometry courses emphasize a practical, synthetic approach to the study of geometry and de-emphasize an abstract, formal approach. Topics include properties of and work with plane and solid figures, including perimeter, area, and volume; lines, segments, angles, and circles; the concepts of parallelism, perpendicularity, congruence, similarity, and proportion; and inductive methods of reasoning.

Review topics: basic measurement.

Enhancement topics: Pythagorean theorem, trigonometric ratios, transformational geometry, coordinate geometry, correspondence between algebraic and geometric concepts, and deductive methods including the concept of proof.

2024 Applied Math—CORD

Following the curriculum developed by the Center for Occupational Research and Development (CORD), these courses use a competency-based approach to the learning of general math, pre-algebra, and pre-geometry topics, and emphasize occupationally-related applications and problem-solving techniques. The 25 course units of Applied Math—CORD courses cover the following topics: estimation; measurement; working with data (including the use of graphs, charts, and tables); lines and angles; two- and three-dimensional figures; ratio and proportion; scale drawings; signed numbers and vectors; scientific notation; precision, accuracy, and tolerance; exponents and radicals; formulas; linear and nonlinear equations; statistics and probability; right-triangle relationships; and trigonometric functions.

2031 Algebra I

Algebra I courses include the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.

Review topics: ratio and proportion, operations with sets, simplifying radical expressions, operations with exponents, and solution of simple linear equations.

Enhancement topics: field properties and theorems, set theory, solving systems of linear equations and inequalities, and solving and graphing more complex quadratic equations.

2032 Algebra I—Part 1

The first year in a two-year sequence of Algebra I. This course generally covers the same topics as the first semester of Algebra I, including the study of properties of rational numbers (i.e., number theory), ratio, proportion, and estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first degree equations and inequalities.

Review topics: arithmetic using rational numbers, basic geometry, and basic statistics.

Enhancement topics: operations involving real numbers, evaluating rational algebraic expressions, graphing first degree equations and inequalities, translating word problems into equations, operations with and factoring of polynomials, and solving simple quadratic equations.

2033 Algebra I—Part 2

The second year in a two-year sequence of Algebra I. This course generally covers the same topics as the second semester of Algebra I, including the study of properties of the real number system and operations, evaluating rational algebraic expressions, solving and graphing first degree equations and inequalities, translating word problems into equations, operations with and factoring of polynomials, and solving simple quadratics.

Review topics: ratio and proportion, operations with sets, simplifying radical expressions, operations with exponents, and solution of simple linear equations.

Enhancement topics: field properties and theorems, set theory, solving systems of linear equations and inequalities, and solving and graphing more complex quadratic equations.

2034 Geometry

Geometry courses, emphasizing an abstract, formal approach to the study of geometry, include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; rules of congruence, similarity, parallelism, and perpendicularity; and rules of angle measurement in triangles, including trigonometry, coordinate geometry, and transformational geometry.

Review topics: basic measurement, perimeter, area, and volume, and inductive methods of reasoning.

Enhancement topics: topology, locus, and non-Euclidean geometries.

2035 Pre-Algebra II

Pre-Algebra II courses review and extend algebra and geometry concepts for students who have already taken Algebra I and Geometry. Pre-Algebra II courses include a review of such topics as properties and operations of real numbers; evaluation of rational algebraic expressions; solutions and graphs of first degree equations and inequalities; translation of word problems into equations; operations with and factoring of polynomials; simple quadratics; properties of plane and solid figures; rules of congruence and similarity; coordinate geometry including lines, segments, and circles in the coordinate plane; and angle measurement in triangles including trigonometric ratios.

Review topics: ratio and proportion; operations with sets; simplifying radical expressions; operations with exponents; solution of simple linear equations; and perimeter, area, and volume.

Enhancement topics: field properties and theorems; set theory; solving systems of linear equations and inequalities; and solving and graphing more complex quadratics.

2041 Algebra II

Algebra II course topics include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; and operations with rational and irrational exponents.

Review topics: operations involving real numbers, evaluating rational algebraic expressions, solving and graphing first degree equations and inequalities, operations with and factoring of polynomials, and solving simple quadratics.

Enhancement topics: the complex number system; polynomial, logarithmic, and exponential functions, relations, and their graphs; conic sections; elementary probability and statistics; matrices and determinants; sequences; and series.

2042 Algebra III

Algebra III courses review and extend algebraic concepts for students who have already taken Algebra II. Course topics include (but are not limited to) operations with rational and irrational expressions, factoring of rational expressions, linear equations and inequalities, quadratic equations, solving systems of linear and quadratic equations, properties of higher degree equations, and operations with rational and irrational exponents. The courses may introduce topics in discrete math, such as elementary probability and statistics including binomial expansion; matrices and determinants; and sequences and series.

Review topics: operations involving real numbers, evaluating rational algebraic expressions, solving and graphing first degree equations and inequalities, operations with and factoring of polynomials, solving simple quadratics, and sets and logic.

Enhancement topics: right triangle trigonometry, and polynomial, logarithmic, and exponential functions, relations, and their graphs.

2043 Trigonometry

Trigonometry courses prepare students for eventual work in calculus and include the study the following topics: trigonometric and circular functions; their inverses and graphs; relations among the parts of a triangle; trigonometric identities and equations; solutions of right and oblique triangles; and complex numbers.

Enhancement topics: vectors, graphing in the polar coordinate system, and matrix algebra.

2044 Algebra II/Trigonometry

Algebra II/Trigonometry courses combine topics from both of these courses for students who have attained Algebra I and Geometry objectives. Topics include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; operations with rational and irrational exponents; right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; and numerical tables.
Review topics: operations involving real numbers, evaluating rational algebraic expressions, solving and graphing first degree equations and inequalities, operations with and factoring of polynomials, and solving simple quadratics.
Enhancement topics: polynomial, logarithmic, and exponential functions and graphs; conic sections; vectors; graphing in the polar coordinate system; elementary probability and statistics; matrices and determinants; and sequences and series.

2045 Elementary Functions

Elementary Functions courses, while preparing students for eventual work in calculus, include the study of relations and functions, including polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their inverses, graphs, and applications.
Review topics: structure of the real number system.
Enhancement topics: statistical and probability functions.

2046 Analytic Geometry

Analytic Geometry courses include the study of the nature and intersection of lines and planes in space, including vectors, the polar coordinate system, equations and graphs of conic sections, rotations and transformations, and parametric equations.
Review topics: solutions of linear and quadratic equations and systems of these equations, and polynomial and rational functions and their graphs in the rectangular coordinate system.
Enhancement topics: matrix algebra, and analytic geometry of solids.

2047 Math Analysis

Math Analysis courses include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.
Review topics: right trigonometric and circular functions and their graphs, and other trigonometry topics.
Enhancement topics: elementary probability and statistics, derivatives, and integrals.

2048 Trigonometry/Analytic Geometry

Covering topics of both Trigonometry and Analytic Geometry, these courses prepare students for eventual work in calculus. Topics include the study of right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; numerical tables; vectors; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; and parametric equations.

Review topics: solutions of linear and quadratic equations.

Enhancement topics: polynomial, logarithmic, exponential, and rational functions and their graphs; matrix algebra; and analytic geometry of solids.

2049 Trigonometry/Math Analysis

Covering topics of both Trigonometry and Math Analysis, these courses prepare students for eventual work in calculus. Topics include the study of right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; numerical tables; polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.

Enhancement topics: elementary probability and statistics, derivatives, and integrals.

2050 Analytic Geometry/Math Analysis

Covering topics from both Analytic Geometry and Math Analysis, these courses prepare students for eventual work in calculus. Topics include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; parametric equations; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.

Review topics: solutions of linear and quadratic equations and systems of these equations, right trigonometric and circular functions and their graphs, and other trigonometry topics.

Enhancement topics: analytic geometry of solids, elementary probability and statistics, derivatives, and integrals.

2051 IB Mathematical Studies

IB Mathematical Studies courses prepare students to take the International Baccalaureate Mathematical Studies exam at the Subsidiary or Higher level. The course is intended to provide the skills needed to cope with the mathematical demands of a technological society. Course topics include linear, quadratic, and exponential functions, solutions, and graphs; skills in computation, estimation, and development of algorithms; data analysis, including collection, calculation, and presentation of statistics; set operations and logic; business techniques, including progressions and linear programming; and geometry and trigonometry.

Enhancement topics: numerical functions, variation properties, financial mathematics, critical path analysis, model building, and multi-dimensional geometry.

2052 IB Mathematics

IB Mathematics courses prepare students to take the International Baccalaureate Mathematics exams at either the Subsidiary or Higher levels. Topics include operations and properties of number sets; trigonometric functions, equations, and graphs; algebra and coordinate geometry; simultaneous linear equations; polynomial and quadratic functions and equations; calculus, including bilinear, exponential and logarithmic functions; two dimensional vectors and matrices; and probability.

Enhancement topics: analysis and numerical calculation; analytical geometry; further calculus, including integration; complex numbers; statistics; two-dimensional particle dynamics.

2053 Pre-Calculus

Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Math Analysis topics as preparation for calculus. Topics include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity.

Review topics: structure of the real number system, solutions of linear and quadratic equations and systems of these equations.

Enhancement topics: elementary probability and statistics, derivatives, and integrals.

2054 Discrete Mathematics

Designed for students who have attained Algebra II objectives, Discrete Mathematics topics include the study of polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions and relations and their graphs; set theory; symbolic logic; Boolean algebra; combinatorics; recursion; basic algebraic structures; and graph theory.

2055 Calculus

Calculus courses are intended for students who have attained pre-calculus objectives, including some combination of Trigonometry, Elementary Functions, Analytic Geometry, and Math Analysis, or Pre-Calculus. They include the study of derivatives, antiderivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus.

Review topics: properties of elementary functions and their graphs, vectors and polar coordinates, and concepts of limits and continuity.

Enhancement topics: improper integral; multiple integration; sequences and series, including convergence tests and series expansion theorems; antidifferentiation; and differential equations.

2056 Multivariate Calculus

Multivariate Calculus courses include the study of hyperbolic functions, improper integrals, directional directives, and multiple integration and its applications.

Enhancement topics: differential forms and vector calculus.

2057 Differential Calculus

Differential Calculus courses include the study of elementary differential equations including first- and higher-order differential equations, partial differential equations, linear equations, systems of linear equations, transformations, series solutions, numerical methods, boundary value problems, and existence theorems.

2058 AP Calculus AB

AP Calculus AB provides students with an intuitive understanding of the concepts of calculus and experience with its methods and applications. These courses introduce calculus and include the following topics: elementary functions; properties of functions and their graphs; limits and continuity; differential calculus (including definition of the derivative, derivative formulas, theorems about derivatives, geometric applications, optimization problems, and rate-of-change problems); and integral calculus (including antiderivatives and the definite integral).

2059 AP Calculus BC

AP Calculus BC courses provide students with an intuitive understanding of the concepts of calculus and experience with its methods and applications, and also require additional knowledge of the theoretical tools of calculus. These courses assume a thorough knowledge of elementary functions, and cover all of the calculus topics in AP Calculus AB as well as the following topics: vector functions, parametric equations, and polar coordinates; rigorous definitions of finite and nonexistent limits; derivatives of vector functions and parametrically defined functions; advanced techniques of integration and advanced applications of the definite integral; and sequences and series.

2061 Probability and Statistics—General Math level

These courses provide an introduction to probability and statistics and reinforce general math skills for students who have previously mastered general mathematics topics. The courses include the study of basic probability and statistics topics: discrete probability theory, sample space, frequency tables, graphing data, and measures of central tendency, and may use these skills in a variety of real world applications.

Enhancement topics: normal curve distribution and measures of variability.

2062 Probability and Statistics—Algebra I level

Probability and Statistics—Algebra I level courses focus on descriptive statistics, with an introduction to inferential statistics. Topics include event probability, normal probability distribution, collection and description of data, frequency tables and graphs, measures of central tendency and variability, random variables, and random sampling.

Enhancement topics: covariance and correlation, central limit theorem, confidence intervals, and hypothesis testing.

2063 Probability and Statistics—Algebra II level

Probability and Statistics—Algebra II level courses emphasize both descriptive and inferential statistics. Topics include event probability; probability distributions including binomial and normal distributions; analysis of data; measures of central tendency and variability; random variables; random sampling; central limit theorem; confidence intervals; and hypothesis testing.

Enhancement topics: nonparametric statistics, multinomial theorem and chi-square tests, ordinary least squares, and simple regression.

2064 Business Math—General Math level

This course reinforces general math skills for students who have previously attained them, emphasizes speed and accuracy in computations, may extend the general math skills to cover additional math concepts, and uses these skills in a variety of business applications. Business Math reinforces general math topics such as arithmetic using rational numbers, measurement, and basic statistics. In addition, these courses apply these skills to business problems and situations; applications might include wages, hourly rates, payroll deductions, sales, receipts, accounts payable and receivable, financial reports, discounts, and interest.

Enhancement topics: ratio and proportion, exponents, formulas, and simple equations.

2065 Business Math—Algebra I level

Intended for students who have attained Algebra I objectives, these Business Math courses apply algebra concepts to a variety of business and financial situations. Applications include insurance, credit, banking, stocks and bonds, trusts and estates, finance, and taxation.

2066 Business Math—Algebra II level

Intended for students who have attained the objectives of Algebra II, Business Math—Algebra II level courses apply algebra concepts to a variety of business and financial situations.

2067 Business Math—Pre-Calculus level

Intended for students who have attained pre-calculus objectives, Business Math—Pre-Calculus level courses apply advanced algebra concepts to a variety of business and financial situations such as the mathematics associated with annuities. Topics may include linear programming, probability, and an introduction to limits and the intuitive calculus ideas associated with differentiation and integration.

2068 Computer Math—Algebra I level

Intended for students who have attained the objectives of Algebra I, Computer Math—Algebra I level courses include a study of computer systems and programming, and use the computer to solve math problems.

2069 Computer Math—Algebra II level

Intended for students who have attained the objectives of Algebra II, Computer Math—Algebra II level courses include a study of computer systems and programming, and use the computer to solve math problems.

2070 Computer Math—Pre-Calculus level

Intended for students who have attained pre-calculus objectives, Computer Math—Pre-Calculus level courses include a study of computer systems and programming, and use the computer to solve math problems.

2071 IB Mathematics and Computing—SL

IB Mathematics and Computing—SL courses prepare students to take the International Baccalaureate Mathematics and Computing exam at the Subsidiary level. Designed to give students a working knowledge of a high level programming language developed in the context of sound mathematical training, course topics include operations and properties of number sets; trigonometric functions, equations, and graphs; algebra and coordinate geometry, including simultaneous linear equations, binomial theorem, and polynomial and quadratic functions and equations; calculus, including bilinear, exponential and logarithmic functions; vectors and matrices; and numerical analysis. The courses also contain components on computer problem solving and programming; topics regarding computer hardware, software, modes of operation, and data types and structures.

2072 History of Math—Algebra II level

Intended for students who have attained the objectives of Algebra II, History of Math—Algebra II level courses include a study of the historical development of numbers, computation, algebra, and geometry.

2073 Number Theory—Algebra II level

Intended for students who have attained the objectives of Algebra II, Number Theory—Algebra II level courses review the properties and uses of integers and prime numbers, and extend this information to congruences and divisibility.

2074 Abstract Algebra—Pre-Calculus level

Intended for students who have attained pre-calculus objectives, Abstract Algebra—Pre-Calculus level courses include a study of the properties of the number system from an abstract perspective, including such topics as number fields (i.e., rational, real, and complex numbers), integral domains, rings, groups, polynomials, and the fundamental theorem of algebra.

2075 Linear Algebra—Pre-Calculus level

Intended for students who have attained pre-calculus objectives, Linear Algebra—Pre-Calculus level courses include a study of matrices, vectors, tensors, and linear transformations.

2076 Linear Programming—Pre-Calculus level

Intended for students who have attained pre-calculus objectives, Linear Programming—Pre-Calculus level courses include a study of mathematical modeling and the simplex method to solve linear inequalities.

2096 Mathematics—Independent Study

Mathematics—Independent Study courses, often conducted with instructors as mentors, enable students to explore mathematics topics of interest. These courses may be offered in conjunction with other rigorous math courses, or may serve as an opportunity to explore a topic of special interest. They may also serve as an opportunity to study for AP exams if the school does not offer specific courses for that endeavor.

2099 Mathematics—Other

Military Science (21)
subject fields and course descriptions

This subject area encompasses courses that concern the history, organization, role, and objectives of the United States Armed Forces.

Subject Fields

Type of Credit

(If the school district or state requires physical education credit for graduation, indicates whether this course counts toward credit fulfillment.)

0 - Information not collected, unavailable, or missing.
1 - Completion of this course counts toward PE credit.
2 - Completion of this course does not count toward PE credit.

Branch of Service

(Indicates the branch of service to which the course is oriented.)

0 - Information not collected, unavailable, or missing.
1 - Army
2 - Navy
3 - Air Force
4 - Coast Guard
5 - Marines
6 - General

Subject Field #3

0 - No information requested for this field.

Code Title and Description

2111 Introduction to ROTC

Introduction to ROTC courses introduce students to the purposes and objectives of the Reserve Officer Training Corps program. As part of that introduction, course topics may include a brief history of the military branches in the United States and the basics of military drill, ceremony, and rank structure.

2112 Military ROTC

Although individual course sequences may vary, the primary objectives of Military ROTC courses include instruction in the history, organization, role, objectives, and achievements of a particular branch of the United States Armed Forces; development of personal fitness, strong character, and leadership qualities; and exposure to the career opportunities provided by the military. Military customs, courtesies, rank, drill, and ceremonies are typically included as course topics; citizenship and scholarship are often emphasized as well. Subjects related to the particular branch being studied (such as map-reading, nautical skills, aerospace technology, and jet propulsion), as well as more general subjects (international law, weaponry, celestial navigation, and geopolitical strategy) may also be included as part of the course content.

2121 ROTC Drill

ROTC Drill courses provide students with an additional opportunity to improve their skills in military precision. Marching and rifle manipulation, body coordination and mechanics, and performing as a member of an orchestrated team are particularly emphasized. Members of these classes may take part in ceremonies and competitions.

2195 Military Science—Related Subjects

Military Science—Related Subjects courses convey information from other subject areas, but relate the skills and knowledge specifically to the emphasized branch of service. Examples include engine mechanics, electricity/electronics courses, aviation techniques, and so on.

2199 Military Science—Other

Multi/Interdisciplinary Studies (22)
subject fields and course descriptions

This subject area encompasses courses that combine the subject matter of two or more of the 29 subject areas described in this classification system; apropos of this description, this subject area includes Humanities courses.

The subject fields that follow should indicate which disciplines are combined within the course. Because there are 3 subject fields, a maximum of 3 disciplines may be specified, although the courses may involve more than the 3 subjects specified.

Subject Studied (Indicates, using the codes below and choosing up to three options, which subjects or disciplines are combined in the course.)

0 - Information not collected, unavailable, missing, or not applicable.
1 - Fine and Performing Arts (Painting, Drama, Dance, Music, etc.)
2 - Language Arts/Literature (English, literature of other languages, other languages [grammar or conversation], etc.)
3 - Mathematics (General Math, Algebra, Geometry, Advanced Math, Statistics, etc.)
4 - Natural Sciences (Earth Sciences, Biology, Chemistry, Physics, etc.)
5 - Social Sciences (Geography, Economics, Psychology, History, Sociology, Philosophy, Anthropology, Government, Politics, etc.)
6 - Computer Technology (Programming, Modelling, Artificial Intelligence, Software Applications, etc.)
7 - Vocational Studies (Agriculture, Construction Trades, Health Care, Trade and Industrial Education, Manufacturing Trades, Public Services, etc.)
8 - Religious Education and Theology (Religious Foundations, Liturgy and Prayer, Scriptures, etc.)

Code Title and Description

2201 Humanities Survey

Humanities Survey courses provide an overview of major expressions of the cultural heritage of selected western and eastern civilizations. The content should include but not be limited to the examination of selected examples of art, music, literature, architecture, technology, philosophy, and religion of the cultures studied. The languages and political institutions of the cultures studies may also be included.

2202 Humanities

Humanities courses examine and evoke responses to man's creative efforts and his world in particular historical periods of history and in particular cultures. Course content includes exploration, analysis, synthesis and response in a variety of ways to cultural traditions, including viewing, listening, speaking, reading, writing, performing, and creating. The courses may also examine the interrelationship of painting, sculpture, architecture, and music.

2203 Issues of Western Humanities

Issues of Western Humanities courses introduce students to the study of man's cultural heritage and provide an opportunity to explore fundamental humanity. The content typically includes the following: definitions of the humanities in relation to history, literature, religion, philosophy, art, music, and architecture; study of the cultures of Greece, Rome, and one or more settings in contemporary time periods. After successfully completing this course, students will be able to analyze and clarify their sense of themselves; examine and clarify their responsibilities in relation to those of others; examine philosophies concerning moral responsibility for the future; and examine philosophies about human mortality.

2211 IB Theory of Knowledge

Obligatory for every candidate for the International Baccalaureate degree, IB Theory of Knowledge courses aim to stimulate critical student reflection on the knowledge and experiences gained during high school. The courses seek to generate questions regarding the bases of knowledge and their verification in the disciplines of mathematics, natural sciences, human sciences, and history, with an awareness of moral, political, and aesthetic judgments and biases. After completing the course, the student should be able to appreciate the strengths and limitations of various kinds of knowledge; to relate subjects studied to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and as a means of conveying knowledge.

Note:
Because multi/interdisciplinary courses vary so widely due to the disciplines combined, the following course descriptions are provided as models of possible types of multi/interdisciplinary courses.

2221 Team-Taught Block

Team-Taught Block courses reserve an extended period of time to students to pursue a thematic unit (or units) of study, drawing lessons from more than one discipline. The courses are taught in teams by instructors of the pertinent disciplines, who weave their lessons together, encourage students to be involved in their own learning process, and strive to engender critical thinking and problem solving. Students typically work in small groups as well as individually.

2222 Thematic Integration

Thematic integration courses explore a problem posed either by faculty or by students from the perspective of various disciplines. Not necessarily team-taught, the course nonetheless strives to view the problem and to pose solutions using concepts from several areas of study.

2223 Issues of American Culture

Issues of American Culture courses examine political, gender-related, and multicultural issues of the American experience. Typically using the discipline of language arts or history as a base, these courses explore the experiences of various groups of people in the United States. Group work, seminars, and cooperative learning are often used to foster learning and understanding.

2224 Travel Program

Combining the study of various disciplines with a travel component, Travel Program courses enable students to physically see and experience the aspects, applications, or ramifications of the content of their coursework. The travel component may be a series of short trips or a longer, single venture lasting several weeks.

2299 Multi/Interdisciplinary Studies—Other

Physical Education (23)
subject fields and course descriptions

This subject area encompasses courses that concern instruction in the movement and physical fitness of the body.

Subject Fields

Type of Credit

(If the school district or state requires physical education credit for graduation, indicates whether this course counts toward credit fulfillment.)

0 - Information not collected, unavailable, or missing.
1 - Completion of this course counts toward PE credit.
2 - Completion of this course does not count toward PE credit.

Health

(Indicates whether the course includes a health component.)

0 - Information not collected, unavailable, or missing.
1 - The course includes a health component (typically covering topics such as diet, disease and wellness, human growth and development, and so on).
2 - The course does not include a health component.

Human Sexuality

(Indicates whether the course includes a human sexuality component.)

0 - Information not collected, unavailable, or missing.
1 - The course includes a human sexuality component.
2 - The course does not include a human sexuality component.

Code Title and Description

2301 Physical Education

Physical Education courses provide experience and develop skills in a range of activities, from more than one of the following areas: team, individual, dual, or recreational sports, or fitness and conditioning activities.

2302 Physical Education/Health

Physical Education/Health courses combine the development of physical skills in a range of activities with a significant emphasis on health issues of human beings. The physical education portion of the course may draw from team, individual, dual, or recreational sports, or fitness and conditioning activities. The health component usually covers a range of topics and may include healthy eating habits, disease prevention, mental health concepts, drug/alcohol abuse prevention, and human reproduction and sexuality.

2303 Physical Education/Drivers' Education

Physical Education/Drivers' Education courses combine the development of physical skills in a range of activities with the lessons necessary to become safe drivers on America's roadways. The physical education portion of the course may draw from team, individual, dual, or recreational sports, or fitness and conditioning activities. The drivers' education component includes topics such as legal obligations and responsibility, rules of the road and traffic procedures, safe driving strategies and practices, and physical and mental factors affecting the driver's capability (including alcohol and other drugs).

2311 Team Sports

Team Sports courses provide experience and develop skills in more than one team sport (such as volleyball, basketball, soccer, and so on).

2312 Individual/Dual Sports

These courses provide experience and develop skills in more than one individual or dual sport (such as tennis, golf, jogging, racquetball, and so on).

2313 Recreation Sports

Recreation sports courses provide experience and develop skills in more than one recreational sport or activity (such as tennis, badminton, croquet, frisbee, bocce ball, fishing, hiking, cycling, and so on).

2314 Fitness/Conditioning Activities

The emphasis in Fitness/Conditioning Activities courses is on conditioning activities that develop muscular strength, flexibility, and cardiovascular fitness.

2315 Corps Movement

Corps Movement courses emphasize physical conditioning, fundamentals of movement, group precision, and public performance. The course may be intended for members of various teams, including flag corps, rifle corps, cheerleading squads, and so on.

2316 Adapted Physical Education

These courses provide physical education activities (sports, fitness, and conditioning) adapted for students with special needs.

2321 Gymnastics

These courses are designed to develop skills in gymnastics; they may or may not include other components such as history of gymnastics and conditioning.

2322 Weight Training

Weight Training courses develop skills with free weights and universal stations; they may or may not include other components such as anatomy and conditioning.

2323 Swimming

These courses are intended to develop swimming skills. Swimming courses may also include (or concentrate exclusively on) diving and/or lifesaving skills.

2324 Tennis

These courses are intended to develop tennis skills.

2325 Specific Sports Activities

Courses in Specific Sports Activities provide experience and develop skills in a single sport—team, individual, or dual—other than the specific sports mentioned above. (Dance is included under the Fine and Performing Arts subject area.)

2331 Physical Education Equivalent

These courses award physical education credit for other at-school activities, such as marching band or cheer leading. (Dance is included under the Fine and Performing Arts subject area.)

2332 Off-Campus Sports

These courses award physical education credit for off-campus sports activities.

2341 Lifetime Fitness Education

The acquisition of knowledge and skills regarding lifetime physical fitness is emphasized in these courses; content may include related topics such as nutrition, stress management, and consumer issues. Students may develop and implement a personal fitness plan.

2351 Sports Physiology

Courses in Sports Physiology examine anatomy and physiology as they pertain to participation in sports activities; they may or may not emphasize the prevention and treatment of athletic injuries.

2399 Physical Education—Other

Precision Metalwork (24)
subject fields and course descriptions

This subject area encompasses courses that concern the knowledge and skills involved in shaping objects out of metal, including machining and welding.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

2403 Machining

Machining courses enable students to create machine parts using various machine tools and equipment. Course content may include interpreting specifications for machines using blueprints, sketches, or descriptions of parts; preparing and using lathes, milling machines, shapers, and grinders with skill and safety; developing part specifications; and selecting appropriate materials.

2404 Particular Topics in Machining

These courses provide instruction in specific aspects of machining. The course may emphasize a particular type of machine, tool, or procedure, or may concentrate on a particular industrial application of machining techniques.

2412 Metalworking

Metalworking courses introduce students to the qualities and applications of various metals and the tools used to manipulate and form metal into products. Through one or more projects involving metals, students develop planning, layout, and measurement skills; gain experience in cutting, bending, forging, casting, and/or welding metal; complete projects according to blueprints or other specifications; and may learn to polish and finish metals. Correct use of metalworking tools and equipment is stressed.

2413 Sheet Metal

Sheet Metal courses expose students to the skills and information necessary to layout, fabricate, assemble, install, maintain, and repair items and structures created from sheet metal components. Students learn the safe and efficient operation of various tools, and typically gain skill in blueprint reading; welding; and finishing and polishing metals.

2414 Welding

These courses introduce students to the properties, uses, and applications of various metals. Welding courses provide experience in various processes used to join and cut metals (such as oxyacetylene, shielded metal arc, metal inert gas and tungsten arc processes) and the proper use of each technique. Courses often include instruction interpreting blueprints or other types of specifications.

2415 Particular Topics in Welding

In these courses students gain knowledge and skills of particular aspects of welding. Examples include individual courses in each of the following types of welding: gas metal arc welding, gas tungsten arc welding, and shielded metal arc welding.

2495 Precision Metalwork—Related Subjects

Precision Metalwork—Related Subjects courses provide students with related skills and knowledge necessary or desirable for careers in welding or machine technologies. The presentation of particular topics and skills, or their applications, may vary with the occupation or technology. For example, mathematics for welding students may differ in some respects from mathematics for machining students.

2496 Precision Metalwork—Independent Study

Precision Metalwork—Independent Study courses, often conducted with instructors as mentors, enable students to explore metal-related topics of interest in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular industry application, to explore a topic of special interest within a related industry, or to develop greater machining skills.

2497 Precision Metalwork—OJT

Through Precision Metalwork—OJT courses, work experience is gained within the welding or machine technologies field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Precision Metalwork—OJT experience.

2498 Precision Metalwork—Co-op

Precision Metalwork—Co-op courses provide work experience in the welding or machine technologies field, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

2499 Precision Metalwork—Other

Public, Protective, and Social Services (25)
subject fields and course descriptions

This subject area encompasses courses that concern serving and protecting the public in a non-military fashion—public management, justice administration, fire protection, education, and civil engineering.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

2501 Exploration of Public Service Careers

Exploration of Public Service Careers courses expose students to the duties, responsibilities, requirements, and career opportunities within pubic service. Course topics vary and may include (but are not limited to) the following: education; protective services; correction, judicial, and probation services; fire protection and fire fighting; public administration; and social work. Course activities depend upon the career clusters explored.

2503 Community Protection

Community Protection courses provide students with information regarding the personnel and agencies concerned with protection of the home, city, state, and nation. Topics may include civil defense and disaster preparedness; crime prevention; pollution control; fire prevention and control; legal and social systems and principles; and public health. These topics may be explored as a community resident and citizen using these services, or as one interested in pursuing a career in public service.

2504 Public Administration

Public Administration courses provide an overview of the structure, roles, and duties of public governments and associated agencies. These courses explore the foundation and evolution of the public service sector, issues related to the provision of services by governmental bodies, and the missions and constraints of various departments within local and state governments. In addition, students may explore a particular topic of public administration (such as the tax base and structure, the legislative process, selection of public servants, resource management, and so on) in greater detail.

2513 Criminal Justice Assisting

Criminal Justice Assisting courses train students to understand and apply the principles and procedures essential to the U.S. criminal justice system. The principles and structure of the justice system and the law are explored; course content also typically includes traffic control, investigation, search and arrest, laboratory, forensic, and trial procedures. Students may also learn CPR and first aid skills, personal defense tactics, and crime prevention techniques.

2523 Fire Fighting

Fire Fighting courses offer students the opportunity to learn fire prevention and control under controlled conditions. The organization, rules, requirements, and regulations of fire departments are presented; the tools and techniques used by firefighters to control or extinguish fires are examined and practiced; and the behavior of fires is studied. Emergency medical techniques are typically included; fire investigation techniques may also be presented.

2533 Teacher Assisting

Teacher Assisting courses introduce the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. Students may be trained in classroom management, student behavior, leadership and human relations skills, assessment of student progress, and various teaching techniques. Teacher Assisting courses are often accompanied by opportunities to assist elementary school or preschool teachers.

2534 Educational Methodology

Educational Methodology courses are similar to Teacher Assisting courses in that they prepare students to teach and guide others. However, these courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques are examined and practiced.

2543 Civil Engineering

Civil Engineering courses expose students to the concepts and skills used by urban planners, developers, and builders. Students may be trained in soil sampling and analysis; topography and surveying; and drafting or blueprint-reading. Additional course topics may include traffic analysis, geologic principles, and urban design.

2595 Public, Protective, and Social Services—Related Subjects

Public, Protective, and Social Services—Related Subjects courses provide students with related skills and knowledge necessary or desirable in public service careers. Such topics may include science, mathematics, or communications.

2596 Public, Protective, and Social Services—Independent Study

Public, Protective, and Social Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to their program in greater depth and detail. Independent Study courses may serve as an opportunity to expand expertise in a particular application or to explore a topic of special interest within a closely related field.

2597 Public, Protective, and Social Services—OJT

Through Public, Protective, and Social Services—OJT courses, work experience is gained within the public service sector. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance or experience is not an integral part of the Public, Protective, and Social Services—OJT experience.

2598 Public, Protective, and Social Services—Co-op

Public, Protective, and Social Services—Co-op courses provide work experience in the public service sector, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study in the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

2599 Public, Protective, and Social Services—Other

Religious Education and Theology (26)
subject fields and course descriptions

This subject area encompasses courses that concern a personal or institutionalized system of attitudes, beliefs, and practices, particularly as related to an ultimate deity, spirit, or reality.

Subject Fields

Type of Credit

(Indicates the type of credit that students receive toward graduation upon completing the course.

0 - Information not collected, unavailable, or missing.
1 - Religious Education credit
2 - (Not a valid option)
3 - Social studies credit
4 - Fine Arts/Humanities credit
5 - Vocational credit
6 - Dual credit (in two different subject areas)
7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8 - Other type of credit
9 - Elective credit

Doctrine

(Indicates whether a particular religion's doctrines undergird the course objectives.)

0 - Information not collected, unavailable, or missing.
1 - The course conveys (explicitly or implicitly) the teachings and beliefs of a particular religion or faith.
2 - The course does not adhere to the doctrine of any particular religion or faith.

Community Service

(Indicates whether the course requires a community service project or involvement in community service activities.)

0 - Information not collected, unavailable, or missing.
1 - The course includes a required community service component.
2 - The course does not include a required community service component.

Code Title and Description

2601 Religious Foundations

Although individual components may vary, the primary objectives of Religious Foundations courses include instruction in the history, tenets, and organization of a religion; development of personal faith and conviction; and exposure to the ways in which daily life may reflect personal religious beliefs. Religious faith courses may include various aspects particular to a specific religion, such as religious sacraments and symbols, food laws, the authority and structure of the church, the church calendar, and so on.

2605 Comparative Religion

Comparative Religion courses survey and compare the various forms and values of several world religions, offering students a basic understanding of the world's diverse religious faiths and practices. Course topics may include the belief systems of adherents; the relationships between humans and nature, ancestors, and the spiritual world; and the historical development of each religion.

2606 Eastern Religions

Similar to Comparative Religion, Eastern Religions courses provide an overview of various religions and belief systems, but concentrate on those of the Eastern World. Particular religious or philosophical systems studied may include Buddhism, Hinduism, Islam, Taoism, Shintoism, and Confucianism, among others.

2607 Western Religions

Similar to Comparative Religion, Western Religions courses provide an overview of various religions and belief systems, but concentrate on those of the Western World. Particular religious or philosophical systems studied may include Judaism; Christianity (including various faiths such as those of Catholics, Episcopalians, Baptists, Quakers, Mormons, Mennonites, and others); and Native Indian belief systems, among others.

2611 Scriptures

Scriptures courses place an emphasis on understanding and interpreting scriptures of a faith (such as the Bible, Torah, Koran, Book of Mormon, and so on) from the standpoint of a religious faith. Course objectives are designed so that students may comprehend the theological, doctrinal, and ethical messages contained within the books of the religious scriptures.

2612 Bible History

Bible History courses treat the Bible as an historical document, and provide an overview of significant biblical events. Course content may include geography, the relationship between cultures and belief systems and the events chronicled in the Bible, and early Christian Church history.

2615 Christology

Christology courses concern the work and life of Jesus Christ and the literature relating to him. Course content is typically based on Christian scriptures, leading to an examination of the message of Jesus Christ and the application of that message to daily life.

2621 Liturgy and Prayer

Liturgy and Prayer courses vary widely, usually dependent upon the underlying religion, but in general seek to inform students of the meaning and message of public and private worship. Course content typically includes an examination or exploration of common rituals, spoken or sung prayers, and observed sacraments.

2631 Ethics and Morality

Usually including an introduction or examination of the tenets of a particular faith, Ethics and Morality courses seek to enable students to apply the moral teachings of a faith to their own lives, to the larger community, and to their decision-making processes. Course content may focus on issues such as peace and justice, death and dying, human sexuality, professional ethics, and human rights.

2632 Justice, Peace, and Faith

Justice, Peace, and Faith courses examine the scriptural foundations for justice, typically with an historical overview of the church's social teaching. Poverty, hunger, conflict, discrimination, justice, and environmental issues are among the topics discussed with a view toward developing students' critical reflection and analysis of their own roles and responsibilities.

2635 Christian Lifestyle

Christian Lifestyle courses focus on the development of young adults from puberty to adulthood, approached from a Christian perspective. Christian values and traditions underpin the examination of such topics as identity, independence, sexuality, employment and leisure. Typically, discussions of adult roles—single life, marriage, religious life, and ordained ministry—are included.

2641 Ministry

Ministry courses introduce students to the vocation of service. Students may learn counseling skills, plan and be part of religious services, and minister to younger students or to members of the local community (assisting in hospitals and convalescent homes, crisis centers, soup kitchens, and so on).

2642 Ministry—Other

2695 Religious Education and Theology—Related Subjects

Religious Education and Theology—Related Subjects courses provide students with knowledge related to religious issues and religious life. Such topics may include literature, science, philosophy. history, or art.

2696 Religious Education and Theology—Independent Study

Religious Education and Theology—Independent Study courses, often conducted with instructors, members of the clergy, or religious leaders as mentors, enable students to explore topics of interest related to religion in greater depth and detail. Independent Study courses may serve as an opportunity to explore a topic of special interest.

2699 Religious Education and Theology—Other

Note:

Some courses may be more adequately described by courses within the following subject areas:

Consumer and Homemaking Education (Family Living, Personal Development)
Elective Activities (Community Service, Values Clarification, Seminar)
Social Sciences and History (Philosophy)

Social Sciences and History (27)
subject fields and course descriptions

This subject area encompasses courses that concern the study of human society: the institutions and functioning of society (including political, economic, and legal systems), the relationships created among members of a society, and the history of human civilization and endeavor.

Subject Fields

Type of Credit

(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)

0 - Information not collected, unavailable, or missing.

1 - Primary Social Studies credit
(Often, graduation requirements include specific types of social studies credit, such as World History, U.S. History, Government, Economics, and so on. This option signifies fulfillment of one of these specific social studies credit requirements.)

2 - Secondary Social Studies credit
(In addition to specific types of social studies credits, several school systems require additional coursework to fulfill graduation requirements. This option signifies fulfillment of one of these general or elective social studies credit requirements.)

3 - English credit

4 - Fine Arts/Humanities credit

5 - Vocational credit

6 - Dual credit (in Social Studies and another subject area)

7 - Student choice
(Students may choose between two or more types of non-elective credit to be received upon successful completion of the course)

8 - Other type of credit

9 - Elective credit

(Subject Fields continued on next page)

Subject Fields, continued

Frequency of Writing (Indicates, on average, how frequently students are required to write in this course.)

0 - Information not collected, unavailable, or missing.
1 - Less frequently than once per month
2 - Approximately once a month
3 - About every two weeks
4 - Weekly
5 - Daily

Primary Sources (Indicates whether students work frequently—at least once per month—with primary source materials.)

0 - Information not collected, unavailable, or missing.
1 - Students work frequently with primary source materials.
2 - Students do not work frequently with primary source materials (although some assignments may include using them).

Code Title and Description

2701 World Geography

World Geography courses provide an overview of world geography, but may vary widely in topic coverage. Possible topics include the physical environment; the political landscape; the relationship between people and the land; economic production and development; and the movement of people, goods, and ideas. These courses may or may not place an emphasis on U.S. geography.

2702 Topics in Geography

These courses examine a specific topic in geography, such as physical or cultural geography, or the geography of a particular area or region, rather than providing an overview. Topical geography courses may or may not concentrate on U.S. geography.

2703 IB Geography

IB Geography courses prepare students to take the International Baccalaureate Geography exams at either the Subsidiary or Higher level, and individual courses vary to reflect the different emphases of the exams (either human or physical geology, and case study or fieldwork instruction). In general, however, IB Geography courses aim to provide an understanding of the relations within society, those between society and the natural environment, and the processes by which those relations change over time.

2704 World History—Overview

World History—Overview courses provide an overview of the history of human society from early civilization to the contemporary period, examining political, economic, social, religious, military, scientific, and cultural developments. World History—Overview courses may include geographical studies, but often, these components are not explicitly taught as geography.

2705 World History—Laboratory

Covering the same objectives as World History—Overview, World History—Laboratory courses are taught in a resource center or skills laboratory setting emphasizing individual student progress.

2706 World History and Geography

In addition to covering the objectives of World History—Overview courses, World History and Geography courses include an overview of world geography. These courses are often developed in response to increased national concern regarding the importance of geography, and attention is paid to exploring geographical concepts.

2707 Modern World History

Modern World History courses provide an overview of the history of human society in the past few centuries—from the Renaissance period, or later, up to the contemporary period—exploring political, economic, social, religious, military, scientific, and cultural developments.

2708 IB History

IB History courses prepare students to take the International Baccalaureate History exams at either the Subsidiary or Higher level. These courses concern the study of political, military, economic, social, and cultural trends, and explore the nature of historical documentation and historians' methods. IB History courses survey 20th century topics in an international context; provide for a more detailed regional study of a major area (Africa, Europe, the Americas, West and South Asia, East and Southeast Asia, or Australia); and enable students to undertake an individual study on a subject of interest in greater detail and depth.

2709 Modern European History

Modern European History courses examine the development of political, social, and economic movements in Europe in the past few centuries (from the Renaissance period, or later, up to the contemporary period), and may include such topics as the rise of the modern nation state, scientific and industrial revolutions, the age of exploration and nationalism, imperialism, and world war. Course content may include the history of Russia over the same time period.

2710 AP European History

AP European History courses prepare students for the AP exam in European history. The courses examine European civilization from the High Renaissance period to the recent past, provide a basic exposure to the factual narrative, and develop a) an understanding of some of the principal themes in modern European history, b) an ability to analyze historical evidence, and c) an ability to express that understanding and analysis in writing.

2711 Ancient Civilizations

Ancient Civilizations courses survey the evolution of society from the ancient Near East through Greek and Roman civilizations. Typically, the rise and fall of civilizations and empires are studied with an emphasis on the legacies provided to successive societies.

2712 Medieval European History

Medieval European History courses survey European civilization from the fall of Rome through the late Middle Ages.

2713 Ancient and Medieval History

Ancient and Medieval History courses combine a study of ancient civilizations and Medieval Europe, beginning with the civilizations of the ancient Near East and continuing through the late Middle Ages in Europe.

2714 World Area Studies

World Area Studies courses examine the history, politics, economics, society, and/or culture of one or more regions of the world, such as Africa, Latin America, the former Soviet Union, Far East Asia, and the Middle East. These courses may focus primarily on the history of the region, or may take an interdisciplinary approach to the contemporary issues affecting the region. Furthermore, these courses may focus on one particular country (other than the United States), rather than focusing on a region or continent.

2721 U.S. History—Comprehensive

U.S. History—Comprehensive courses provide an overview of the history of the United States, examining time periods from discovery or colonialism through World War II or after. Political, military, scientific, and social developments are typically included in the historical overview. Course content may or may not include a history of the North American peoples prior to European settlement.

2722 U.S. History—Laboratory

Covering the same objectives as U.S. History—Comprehensive courses, U.S. History—Laboratory courses are taught in a resource center or skills laboratory setting emphasizing individual student progress.

2723 Early U.S. History

Early U.S. History courses examine the history of the United States from the colonial period up to the Civil War or Reconstruction era. Some courses include American history prior to European settlement; others may begin study at the formation of the new nation. Political, military, scientific, and social developments are typically included as part of the historical overview.

2724 Modern U.S. History

Modern U.S. History courses examine the history of the United States from the Civil War or Reconstruction era (some courses begin at a later time period) through the present time. Political, military, scientific, and social developments are typically included as part of the historical overview.

2725 AP U.S. History

AP U.S. History courses prepare students for the AP exam in U.S. history and provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history. Students learn to assess historical materials, and to weigh the evidence and interpretations presented in historical scholarship. The course examines time periods from discovery and settlement of the New World through the recent past.

2726 State-Specific Studies

State-Specific Studies courses examine the history, politics, economics, society, and/or cultures of one of the states in the United States. This course may focus primarily on the history of the state, or may take an interdisciplinary approach to the contemporary issues affecting the state.

2727 U.S. Ethnic/Gender Studies

U.S. Ethnic/Gender Studies courses examine the history, politics, economics, society, and/or culture of one or more of the racial-ethnic groups in the United States or of gender in U.S. society. These courses may focus primarily on the history of the ethnic group or of gender relations, or may take a more comprehensive approach to the contemporary issues affecting these groups.

2729 U.S. History—Other

2730 U.S. Government—Comprehensive

U.S. Government—Comprehensive courses provide an overview of the structure and functions of the U.S. government and political institutions, and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. These courses may or may not examine the structure and function of state and local government. Course content may include some coverage of economic and legal topics.

2731 U.S. Government—Laboratory

Covering the same objectives as U.S. Government—Comprehensive courses, U.S. Government—Laboratory courses are taught in a resource center or skills laboratory setting emphasizing individual student progress.

2732 Topics in U.S. Government

These courses examine a specific topic pertaining to U.S. government and political institutions, rather than providing a general overview. The courses concentrate on one of many possible topics related to governmental structure, function, and purposes, such as the Constitution, the Supreme Court, Congress, or the Office of the Presidency.

2733 Political Science

Political Science courses approach the study of politics from a theoretical perspective, including an examination of the role of government, and the nature of political behavior, political power, and political action.

2734 Comparative Government

Comparative Government courses study the basic tenets of government, searching for the differences and similarities among several forms of government. These courses engage in a comparative approach to the study of government and politics, focusing on the United States and other nations.

2735 International Relations

International Relations courses provide an introduction to international relations, including an examination of the modern state; the foreign policies of nations; the dynamics of nationalism, ideology, and culture; and the role of international organizations. The courses may or may not emphasize contemporary events.

2736 AP U.S. Government and Politics

AP U.S. Government and Politics courses prepare students for the AP exam in U.S. Government and Politics. These courses provide students with an analytical perspective on government and politics in the United States, involving both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. The course generally covers the following topics: constitutional underpinnings of U.S. government, political beliefs and behaviors, political parties and interest groups, the institutions and policy process of national government, and civil rights and liberties.

2737 AP Comparative Government and Politics

AP Comparative Government and Politics courses prepare students for the AP exam in Comparative Government and Politics, offering students a basic understanding of the world's diverse political structures and practices. The course encompasses the study both of specific countries (including Great Britain, France, the former Soviet Union, China, and either India, Mexico, or Nigeria), and of general concepts used to interpret the key political relationships found in virtually all national polities. Course content generally includes sources of public authority and political power; the relationship between state and society; the relationships between citizens and states; political and institutional frameworks; political change; and the comparative method.

2738 AP Government

AP Government courses prepare students for the AP exams in both U.S. Government and Politics and Comparative Government and Politics; the course content includes the topics covered in those two separate courses as described above.

2739 Principles of Democracy

Principles of Democracy courses combine a study of the structure of national, state, and local U.S. government with an overview of the principles of market economics. Course content may include contemporary U.S. issues. The emphasized purpose of Principles of Democracy courses is to prepare students to perform effectively as informed citizens.

2740 Government and Politics—Other

2741 Economics

Economics courses provide an overview of economics with primary emphasis on the principles of microeconomics and a focus on the U.S. economic system; these courses may or may not cover topics such as principles of macroeconomics, international economics, and comparative economics. Economic principles may be studied either in a formal or an applied manner, or both.

2742 Comparative Economics

Comparative Economics courses offers a study of different economies and economic systems, including a study of differing approaches to problems in micro- and macroeconomics.

2743 AP Microeconomics

Designed to parallel a semester of college-level microeconomics, AP Microeconomics courses provide students with a thorough understanding of the principles of economics that apply to the functions of individual decisionmakers (both consumers and producers), and place primary emphasis on the nature and functions of product markets, while also including a study of factor markets and the role of government in the economy.

2744 AP Macroeconomics

Designed to parallel a semester of college-level macroeconomics, AP Macroeconomics courses provide students with a thorough understanding of the principles of economics that apply to an economic system as a whole, placing particular emphasis on the study of national income and price determination, and developing students' familiarity with economic performance measures, economic growth, and international economics.

2745 AP Economics

AP Economics courses prepare students for the AP examinations in both Microeconomics and Macroeconomics; these courses include the course content of the two separate courses as described above.

2746 IB Economics

IB Economics courses prepare students to take the International Baccalaureate Economics exams at either the Subsidiary or Higher level. The courses seek to provide students with the basic tools of economic reasoning and to use those tools to explain or interpret economic problems. Course content includes resource allocation under various systems, national income analysis, international economics, and economic development and growth. Income distribution may also be studied.

2751 Contemporary U.S. Issues

Contemporary U.S. Issues courses study the political, economic, and social issues facing the United States, with or without an emphasis on state and local issues. These courses may focus on current issues, or may examine selected issues from throughout the 20th century.

2752 Contemporary World Issues

Contemporary World Issues courses study political, economic, and social issues facing the world, with or without an emphasis on the United States. These courses may focus on current issues, or may examine selected issues from throughout the 20th century. The focus may be on historical causes or possible solutions; an interdisciplinary approach may be used.

2753 Western Civilization

Western Civilization courses apply an interdisciplinary approach to the study of western cultural traditions, frequently using a chronological framework. Course content typically includes a survey of the major developments and contributors in art and architecture, literature, religion and philosophy, and culture. Intellectual and political movements may also be included.

2761 Law Studies

Law Studies courses examine the history and philosophy of law as part of U.S. society, and include the study of the major substantive areas of both criminal and civil law, such as constitutional rights, torts, contracts, property, criminal law, family law, and equity. Although emphasis is placed on the study of law, the workings of the legal system may also be included.

2762 Consumer Law

Consumer Law courses present a history and philosophy of law and the legal system in the United States, with a particular emphasis on those topics affecting students as consumers and young adults (such as contractual laws, laws pertaining to housing and marriage, and constitutional rights).

2763 Business Law

Business Law courses present a history and philosophy of law and the legal system in the United States, with a particular emphasis on those topics affecting students as future business leaders and employees (such topics may include contracts, commercial paper and debt instruments, property rights, employer/employee relationships, and constitutional rights and responsibilities).

2764 Legal System

Legal System courses examine the workings of the U.S. criminal and civil justice systems, including an understanding of civil and criminal law and the legal process, of the structure and procedures of courts, and the role of various legal or judicial agencies. Although emphasis is placed on the legal process, the history and foundation of U.S. law (Constitution, statutes, and precedents) may also be included. Content may also include contemporary problems in the criminal justice system.

2770 Social Science

Social Science courses provide an introduction to the various disciplines in the social sciences, including anthropology, economics, geography, history, political science, psychology, and sociology. Typically, the main course focus is on the methodologies of the social sciences and the differentiation among the various disciplines.

2771 Psychology

Psychology courses introduce students to the study of individual human behavior. Course content typically includes (but is not limited to) an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.

2772 Topics in Psychology

These courses examine a specific topic in psychology, such as human growth and development or personality, rather than providing a more comprehensive overview.

2773 AP Psychology

Designed to parallel an introductory college-level psychology course, AP Psychology courses introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals, expose students to each of the major subfields within psychology, and enable students to examine the methods psychologists use in their science and practice.

2774 IB Psychology

IB Psychology courses prepare students to take the International Baccalaureate Psychology exams at either the Subsidiary or Higher level. Course content includes developmental and social psychology, cognition and learning, and personality subject areas, which are approached in terms of biological/physiological, behavioral, and humanistic frameworks. Courses preparing students for the Higher level exam include greater study of research design and statistics, and involve practical work in psychological research.

2775 Sociology

Sociology courses introduce students to the study of human behavior in society. These courses provide an overview of sociology, generally including (but not limited to) topics such as social institutions and norms, socialization and social change, and the relationships of individuals and groups in society.

2776 Topics in Sociology

These courses examine a specific topic in sociology, such as culture and society or the individual in society, rather than providing an overview of the field of sociology.

2777 Anthropology

Anthropology courses introduce students to the study of human evolution with regard to the origin, distribution, physical attributes, environment, and culture of human beings. These courses provide an overview of anthropology, including but not limited to both physical and cultural anthropology.

2778 Topics in Anthropology

These courses examine a specific topic in anthropology, such as physical anthropology, cultural anthropology, or archeology, rather than providing a more comprehensive overview of the field.

2779 IB Social Anthropology

IB Social Anthropology courses prepare students to take the International Baccalaureate Social Anthropology exams at either the Subsidiary or Higher level. The courses aim to create an awareness of underlying patterns and causes of social relationships and systems, preconceptions and assumptions within the social environment, and the use of ethnographic data in creating models, drawing inferences, and making comparisons.

2780 Philosophy

Philosophy courses provide an introduction to the discipline of philosophy as an analysis of the principles underlying conduct, thought, knowledge, and the nature of the universe. Course content typically includes examination of the major philosophers and their writings.

2781 Topics in Philosophy

These courses examine a specific topic in philosophy, such as culture and society or the individual in society, rather than providing an overview of the field of sociology.

2782 Modern Intellectual History

Modern Intellectual History courses provide an historical overview of modern intellectual movements, generally drawing from different disciplines such as political science, economics, and philosophy.

2783 IB Philosophy

IB Philosophy courses prepare students to take the International Baccalaureate Philosophy exams at either the Subsidiary or Higher levels. These courses challenge students to reflect on and question the bases of knowledge and experience, to develop a personal mode of thought, to formulate rational arguments, and to use language to examine several conceptual themes in a thoughtful, philosophical manner.

2785 IB Organization Studies

IB Organization Studies courses prepare students to take the International Baccalaureate Organization Studies exams at either the Subsidiary or Higher levels. These IB courses provide a broad introduction to the principles and practices of enterprises engaged in producing, distributing, and exchanging goods and services in a variety of economic frameworks. Management styles and structures, decision-making methods, methods for accounting, planning, and communication are a sample of topics explored within these courses.

2786 Social Science Research

Social Science Research courses emphasize the methods of social science research, including statistics and experimental design.

2796 Social Sciences and History—Independent Study

Social Sciences and History—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within one of the fields of social studies.

2799 Social Sciences and History—Other

Special/Exceptional Education (28)
subject fields and course descriptions

This subject area encompasses courses that are designed particularly for students with special and exceptional needs that cannot otherwise be described by courses within the other subject areas of this classification system.

Subject Fields

Subject Field #1

0 - No information requested for this field.

Subject Field #2

0 - No information requested for this field.

Course Target

(Provides an indication of the target audience of course objectives)

0 - Information not collected, unavailable, or missing.
1 - The course has been designed for students who are physically handicapped.
2 - The course has been designed for students who have learning disabilities.
3 - The course has been designed for students who have social or emotional disorders.
4 - The course has been designed for students who are mentally handicapped.
5 - The course has been designed for students with varying exceptionalities or for a mixed group of students.

Note:
Most special/exceptional education courses can be described using the descriptions from the appropriate subject area and a *level* code of 8 to denote that the class is adapted in some manner to accommodate students' special needs. One may even use the Subject Area—Other designation.
Particularly when special modifications are made for a single (or a few) individual(s) in a mainstream class (using a resource teacher, interpreter, or tutor; specialized equipment, or extra resource materials), the course should still be described as it is for other students not needing such services. It is the course that is being described by this system, not individual students.
The following course descriptions are provided as well; however, the specific course content is developed in response to each student's Individual Education Plan (IEP).

Code Title and Description

2802 Special Resources

Special Resources courses provide students with educational services and resources as needed. Reinforcement of any content area may be offered with the use of specific materials or teaching techniques through group instruction or individual tutorial assistance.

2803 Community Living

Community Living courses place a special emphasis on the student's relationship to the surrounding community. Instruction varies with the students and their needs and IEPs; however, these courses provide the skills necessary for independent functioning within the surrounding environment. Course topics may include available community resources and how to access them; emergency skills; and independent living strategies.

2804 Mobility Instruction

Mobility Instruction courses, individualized according to each student's condition and needs, are designed to improve a student's ability to move about and communicate within their surrounding communities (school, neighborhood, workplace, and city or town). The student may be exposed to and assisted in several types of situation to improve the student's mobility and increase the available response options.

2805 Communication Instruction

Communication Instruction courses, like Mobility Instruction courses, are typically individualized according to each student's condition and needs. Increasing the student's communication skills—oral expression, listening comprehension, reading, and writing—is emphasized; communication techniques in several areas (educational, social, and vocational) may be explored.

2806 Social Development Instruction

Social Development Instruction courses teach students the social skills needed for independent functioning within the community. Topics may include self-control, self-expression, obeying rules, decision making, appropriate situational behavior, and how to interact with others and maintain relationships. Students may develop independence, self-confidence, and self-reliance.

2807 Transition

Designed for students who are in the process of moving from self-contained to mainstream education, Transition courses aim to ease that passage using tutoring, seminars on coping skills, personal counseling, and so on.

2899 Special/Exceptional Education—Other

Vocational Home Economics (29)
subject fields and course descriptions

This subject area encompasses courses that concern knowledge and skills useful in the service industry, particularly food service, child and elder care, textiles, hospitality, travel and tourism, and institutional maintenance.

Subject Fields

Occupational Program (Indicates the programmatic nature of the course.)

0 - Information not collected, unavailable, or missing.
1 - This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2 - This course, by itself or in conjunction with others, is part of an approved vocational program designed to develop competencies required for specific career fields or continuing education.
3 - This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Applied Experience (Indicates the nature of the applied experience.)

0 - Information not collected, unavailable, or missing.
1 - Students are required to work in an independent (public or private) business or organization in this occupation or field.
2 - Students are given the opportunity to work in an independent (public or private) business or organization in this occupation or field, but are not required to do so.
3 - Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4 - Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5 - Students practice skills in on-campus laboratories or via classroom simulation.

(Subject Fields continued on next page)

Subject Fields, continued

Academic Integration (Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)

0 - Information not collected, unavailable, or missing.
1 - mathematics
2 - science
3 - language arts
4 - math and science
5 - math and language arts
6 - science and language arts
7 - mathematics, science, and language arts
8 - separate, required course covering math topics related to occupation
9 - separate, required course covering science topics related to occupation

Code Title and Description

2901 Home Economics Career Exploration

Geared for students with a possible interest in vocational home economics, Home Economics Career Exploration courses expose students to the opportunities available in the food, garment, child care, and other service industries. The course may provide hands-on experience within the various occupational areas.

2912 Food Service

Food Service courses, designed for the student who intends to pursue a career in the food service industry, provide instruction regarding nutrition, principles of healthy eating, and the preparation of food. Among the topics covered in Food Service courses are large-scale meal preparation, preserving nutrients throughout the food preparation process, use and care of commercial cooking equipment, food storage, advances in food technology, sanitation, management, and the careers available in the food service industry.

2913 Food Service and Nutrition

Courses in Food Service and Nutrition, designed for students interested in the food service industry, provide information concerning preparation of meals with a strong emphasis on nutrition, balanced diets, and satisfying special dietary needs. Course content may include use of the computer in assessing nutrient content.

2923 Child Care

Child Care courses, designed for students with an interest in the child care field, provide knowledge about the physical, mental, emotional, and social growth and development of children from conception to pre-school age. Main topics include the fundamentals of working with infants, toddlers, and older children; providing healthy environments; evaluating child care settings; and the practices, regulations, and opportunities in the child care industry. Often, Child Care classes provide practical experience in a child care center. Particularly in advanced courses, topics such as various learning theories; development of activities; operation of a child care center; recognition of childhood diseases, abuse, and neglect; and first aid/emergency training may also be covered.

2924 Elder Care

Elder Care, or gerontology, courses emphasize the care of human beings as they grow older. The aging process, death, and dying are dealt with in a realistic manner, and the biological, physiological, social, and psychological needs and concerns of the elderly are introduced and studied. Often geared toward students who are vocationally interested in caring for the elderly, Elder Care courses may cover work and personal habits appropriate to the field, and may offer the opportunity to explore various careers.

2932 Clothing/Textiles

Clothing and Textiles courses introduce and expand upon the various aspects of wearing apparel, garment construction, and the textile industry. Information provided usually covers the selection, characteristics, care, and repair of various textiles; operation and care of domestic and/or commercial sewing machines; construction of one or more garments; and career opportunities in the garment industry.

2933 Home Furnishings Production

Home Furnishings Production courses enable students to plan, select, and construct upholstery, slip covers, draperies and other window treatments, and other home accessories. Some courses may emphasize upholstery exclusively. Proper use of equipment, interior decorating principles, and employability skills are typically included in course content.

2942 Hospitality—General

Hospitality—General courses provide information that is useful for the student who intends to pursue a career involving the travel and tourism, hotel/motel management, entertainment, or restaurant industries. A wide range of information and various experiences related to the hospitality industry are offered, and may include airline, hotel, and dining reservation and registration systems, convention and banquet planning, front desk operations, guest relations and services, travel agency resources, and so on.

2943 Hospitality—Food Service emphasis

Hospitality courses with a food service emphasis provide information useful for the student intending to pursue a career in the hospitality industry, but place a special emphasis on restaurant management and operations. Guest service and relationships, food and beverage services, banquet planning, and other topics related to supportive services within the hospitality industry may be covered in these courses.

2944 Hospitality—Hotel/Motel emphasis

Hospitality courses with a hotel/motel emphasis provide information useful for the student intending to pursue a career involving hotel/motel operations. Property management, guest psychology and relationships, lodging operations, food and beverage services, and other topics related to supportive services within the hospitality industry may be covered in these courses.

2945 Travel/Tourism

Travel/Tourism courses provide the knowledge and skills necessary to work in the travel industry. Travel agency procedures; airline reservation systems; public relations; hotel/motel registration systems and services; and conference, banquet, and convention planning are possible topics of study.

2952 Institutional Maintenance

Institutional Maintenance courses present the knowledge and skills required for service work within institutions. Topics typically include career opportunities, business responsibilities, safety and sanitation procedures, housekeeping and laundry services, and other types of ongoing maintenance.

2995 Vocational Home Economics—Related Subjects

Courses in this category offer instruction in related topics that are necessary or helpful in vocational home economics occupations; such topics typically include mathematics or science.

2997 Vocational Home Economics—OJT

Through Vocational Home Economics—OJT courses, work experience is gained within the Home Economics field. Although goals may be set cooperatively by the student, teacher, and employer, classroom attendance/experience is not an integral part of the Vocational Home Economics—OJT experience.

2998 Vocational Home Economics—Co-op

Vocational Home Economics—Co-op courses provide work experience in the field of home economics, and are supported by classroom attendance and discussion. Goals are set for the employment period; classroom experience may involve further study of the field, improvement of employability skills, or discussion regarding the experiences and problems encountered on the job.

2999 Vocational Home Economics—Other

Appendix A

Numeric and Alphabetic Lists of Course Codes and Titles

01: Agriculture and Renewable Natural Resources

0101 Introduction to Agriculture
0102 Agriculture—Comprehensive
0103 Agriculture Mechanics/Equipment/Structures
0104 Animal Production/Science
0105 Plant Production/Science
0106 Agricultural Production
0107 Agricultural Management
0108 General Horticulture
0109 Ornamental Horticulture

0113 Wildlife Management
0114 Forestry
0115 Natural Resources Management

0123 Animal Processing
0124 Agricultural Processing

0195 Agriculture—Related Subjects
0197 Agriculture—OJT
0198 Agriculture—Co-op
0199 Agriculture—Other

02: Business

0201 Business/Office Career Exploration
0202 Office Procedures—Comprehensive
0203 Office Services
0204 Keyboarding
0205 Word Processing
0206 Recordkeeping
0207 Accounting
0208 Notetaking
0209 Shorthand

0210 Office Machines

0221 Introductory Business
0223 Business Management
0224 Entrepreneurship
0225 Banking and Finance

0296 Business—Independent Study
0297 Business—OJT

0298 Business—Co-op
0299 Business—Other

03: Computer and Information Sciences

0301 Basic Computer
0302 General Computer Applications
0303 Business Computer Applications

0313 Business Programming
0314 Data Systems/Processing
0315 Computer Graphics
0316 Computing Systems
0317 Computer Technology
0318 Network Technology

0323 Computer Science/Programming
0324 BASIC Programming
0325 Pascal Programming
0326 Computer Programming—Other Language
0327 AP Computer Science
0328 IB Computing Studies

0395 Computer and Information Sciences—Related Subjects
0396 Computer and Information Sciences—Independent Study
0397 Computer and Information Sciences—OJT
0398 Computer and Information Sciences—Co-op
0399 Computer and Information Sciences—Other

04: Construction Trades

0401 Construction Careers Exploration
0402 Construction

0414 Carpentry
0415 Framing Carpentry
0416 Particular Topics in Carpentry
0417 Woodworking
0418 Cabinetmaking

0423 Masonry

0431 Air Conditioning
0432 Refrigeration

0433 Heating
0434 Air Conditioning/Refrigeration
0435 Air Conditioning/Heating/Refrigeration
0436 Heating/Ventilation/Air Conditioning
0437 Particular Topics in HVACR
0438 Plumbing
0439 Plumbing and Heating

0441 Exploration of Electricity/Electronics
0442 Electricity—Comprehensive
0443 Residential Wiring
0444 Industrial Electricity
0445 Particular Topics in Electricity

0452 Electronics—General
0453 Particular Topics in Electronics

0462 Electricity/Electronics—General
0463 Particular Topics in Electricity/Electronics

0473 Building Maintenance

0494 Electricity/Electronics—Related Subjects
0495 Construction Trades—Related Subjects
0497 Construction Trades—OJT
0498 Construction Trades—Co-op
0499 Construction Trades—Other

05: Consumer and Homemaking Education

0502 Consumer Home Economics—General
0503 Food & Nutrition
0504 Food Science
0505 Child Development/Parenting
0506 Clothing/Sewing

0513 Life Skills
0514 Self Management
0515 Family Living
0516 Personal Development
0517 Consumer Economics/Personal Finance

0523 Home Furnishing
0524 Home Maintenance

0525 Special Education Home Maintenance
0526 Consumer and Homemaking Education—Integrated

0599 Consumer and Homemaking Education—Other

06: Cosmetology

0603 Cosmetology—Licensing
0604 Barbering
0605 Cosmetology—Non-licensing
0606 Cosmetology—Nail Specialization
0607 Cosmetology—Facial Specialization

0695 Cosmetology—Related Subjects
0697 Cosmetology—OJT
0698 Cosmetology—Co-op
0699 Cosmetology—Other

07: Drafting

0701 Drafting Careers Exploration
0702 Drafting—General
0703 Drafting—Architectural
0704 Drafting—Civil/Structural
0705 Drafting—Electrical/Electronic
0706 Drafting—Technical/Mechanical
0707 CAD Design and Software

0712 Blueprint Reading—General
0713 Blueprint Reading—Related

0795 Drafting—Related Subjects
0796 Drafting—Independent Study
0797 Drafting—OJT
0798 Drafting—Co-op
0799 Drafting—Other

08: Elective Activities

0801 Standardized Test Preparation
0802 State Test Preparation
0803 Study Skills

0811 Dropout Prevention Program

0821 Student Aide
0822 Office Aide
0823 Teacher Aide
0824 Guidance Aide
0825 Library/AVC Aide

0831 Tutoring Practicum
0832 Tutorial
0833 Study Hall

0841 Leadership
0842 School Orientation
0843 School Governance

0851 Community Service
0852 Executive Internship with Seminar
0853 Executive Internship without Seminar

0861 Values Clarification
0862 Seminar

0896 Independent Research
0899 Elective Activities—Other

09: Energy, Power, and Transportation Technologies

0901 Introduction to Automobiles

0911 Introduction to Mechanics/Transportation
0912 Automotive Mechanics—Comprehensive
0913 Particular Topics in Automotive Mechanics
0914 Automotive Service
0915 Diesel Mechanics—General
0916 Particular Topics in Diesel Mechanics
0917 Motorcycle Mechanics
0918 Small Engine Mechanics
0919 Marine Mechanics

0922 Aircraft Power Plant
0923 Aircraft Airframe

0933 Automotive Detailing and Reconditioning

0942 Automotive Body Repair and Refinishing—General

0943 Particular Topics in Automotive Body Repair and Refinishing
0944 Boat Repair/Refinishing

0953 Aviation
0954 Barge and Boat Operation

0963 Energy/Power

0995 Transportation Technology—Related Subjects
0997 Transportation Technology—OJT
0998 Transportation Technology—Co-op
0999 Transportation Technology—Other

10: English Language and Literature

1001 English/Language Arts I (9th grade)
1002 English/Language Arts II (10th grade)
1003 English/Language Arts III (11th grade)
1004 English/Language Arts IV (12th grade)
1005 English/Literature (lower level)
1006 English/Literature (upper level)
1007 English/Composition (lower level)
1008 English/Composition (upper level)
1009 Language Arts Laboratory

1010 Literature
1011 Composition
1012 AP English Language and Composition
1013 AP English Literature and Composition
1014 IB Language A (English)

1021 Creative Writing
1022 Technical Writing

1031 Assisted Reading
1032 Advanced Reading

1041 American Literature/History
1042 Literature/Fine Arts

1051 English Morphology and Grammar

1061 English as a Second Language

1071 Business/Applied English
1072 Applied Communications—AIT

1081 Public Speaking
1082 Forensics—Inclusive
1083 Forensics—Debate
1084 Forensics—Individual Event

1093 English Aide
1096 English Language and Literature—Independent Study
1099 English Language and Literature—Other

11: Fine and Performing Arts

1101 Dance Technique
1102 Dance Repertory
1103 Expressive Movement
1105 Dance Appreciation
1106 Dance—Independent Study
1109 Dance—Other

1111 Introduction to the Theater
1112 Drama/Stagecraft—Comprehensive
1113 Drama—Acting/Performance
1114 Drama—Stagecraft
1115 Directing
1116 Playwriting
1117 History and Literature of the Theater
1118 Drama/Stagecraft—Independent Study
1119 Drama/Stagecraft—Other

1120 General Band
1121 Concert/Marching Band
1122 Concert Band
1123 Marching Band
1124 Orchestra
1125 Contemporary Band
1126 Instrumental Ensembles
1127 Piano
1128 Guitar
1129 Individual Technique—Instrumental Music

1130 Chorus
1131 Vocal Ensembles

1132 Individual Technique—Vocal Music

1141 Music Theory
1142 AP Music Theory
1143 IB Music
1144 Music History/Appreciation
1146 Music—Independent Study
1149 Music—Other

1151 Art Appreciation
1152 Art History
1153 AP Art—History of Art

1161 Creative Art—Comprehensive
1162 Creative Art—Drawing/Painting
1163 Creative Art—Sculpture
1164 Ceramics/Pottery
1165 Printmaking/Graphics
1166 Textiles
1167 Crafts

1171 Photography
1172 Film/Videotape
1175 Computer-Assisted Art

1181 Art Portfolio
1182 AP Studio Art—General Portfolio
1183 AP Studio Art—Drawing Portfolio
1184 IB Art/Design
1186 Visual Art—Independent Study
1189 Visual Art—Other

1194 Integrated Fine Arts
1195 Fine and Performing Art—Related Subjects
1196 Fine and Performing Art—Independent Study
1199 Fine and Performing Art—Other

12: Foreign Language and Literature

1201 Spanish
1202 AP Spanish Language
1203 AP Spanish Literature
1205 French
1206 AP French Language

1207 AP French Literature
1208 Italian

1210 German
1211 AP German Language
1212 Portuguese
1213 Russian
1214 Other European languages
1215 Latin
1216 AP Latin (Vergil, Catullus and Horace)
1217 Greek
1218 Hebrew

1221 Mandarin
1222 Cantonese
1223 Japanese
1224 Korean
1225 Vietnamese
1226 Tagalog or other Filipino language
1227 Other East Asian, Southeast Asian, or Pacific Island languages
1228 Other Asian languages

1231 Native American languages

1241 African languages

1251 Other languages

1261 IB Language A (non-English)
1262 IB Language B
1263 IB Classical Languages

1271 Spanish for Native Spanish Speakers
1272 Language for Native Speakers

1281 Sign Language

1296 Foreign Language and Literature—Independent Study
1299 Foreign Language and Literature—Other

13: Graphic and Printing Communication

1300 Communication Exploration
1301 Graphic Communication Exploration

1311 Printing Careers Exploration
1313 Graphic Arts/Printing

1323 Commercial Art

1333 Commercial Photography

1395 Graphic and Printing Communication—Related Subjects
1397 Graphic and Printing Communication—OJT
1398 Graphic and Printing Communication—Co-op
1399 Graphic and Printing Communication—Other

14: Health and Safety Education

1401 Health Education
1402 Health and Fitness
1403 Community Health
1404 Special Needs Health Education
1405 Safety and First Aid
1406 Health for Parenting Teens
1407 Health and Life Management

1411 Drivers' Education—Classroom only
1412 Drivers' Education—Classroom and Laboratory
1413 Health/Drivers' Education

1499 Health Education—Other

15: Health Care Sciences

1501 Health Care Occupations Career Exploration
1502 Health Care Occupations
1503 Allied Health Occupations
1504 Nursing
1505 Nursing—LPN
1506 Home Health Care

1513 Medical/Clerical Assisting
1514 Medical Office
1515 Medical Lab Technology
1516 EKG Technology
1517 Emergency Medical Technology
1518 Surgical Technology
1519 Central Service Technology

1523 Dental Assisting
1524 Dental Laboratory Technology

1533 Vision Care Assisting

1595 Health Care Sciences—Related Subjects
1596 Health Care Sciences—Independent Study
1597 Health Care Sciences—OJT
1598 Health Care Sciences—Co-op
1599 Health Care Sciences—Other

16: Industrial/Technology Education

1603 Career Exploration
1604 Employability Skills
1605 Diversified Occupations
1606 Work Experience
1607 OJT—Non-specified Program
1608 Co-op—Non-specified Program

1611 General Industrial Arts
1612 Materials and Processes
1613 Metal and Wood Technology
1614 Industrial Safety/First Aid

1623 Production Systems
1624 Manufacturing Systems
1625 Technology Systems
1626 Emergent Technologies
1627 Research and Development

1633 Appliance Repair
1634 Equipment Maintenance and Repair

1643 Upholstery

1695 Industrial/Technology Education—Related Subjects
1696 Industrial/Technology Education—Independent Study
1697 Industrial/Technology Education—OJT
1698 Industrial/Technology Education—Co-op
1699 Industrial/Technology Education—Other

17: Life and Physical Sciences

1701 Earth Science
1702 Geology
1703 Physical Science
1704 IB Physical Science

1711 Biology—First Year
1712 Biology—Advanced Studies
1713 Anatomy and Physiology
1714 Biology—Specific Topics
1715 AP Biology
1716 IB Biology

1721 Chemistry—First Year
1722 Chemistry in the Community
1723 Chemistry—Advanced Studies
1724 Chemistry—Specific Topics
1725 AP Chemistry
1726 IB Chemistry

1731 Physics—First Year
1732 Principles of Technology
1733 Physics—Advanced Studies
1734 Physics—Specific Topics
1735 AP Physics B
1736 AP Physics C
1737 IB Physics

1741 Integrated Science
1742 Unified Science
1743 Applied Biology/Chemistry—CORD

1751 Environmental Science

1761 Astronomy

1771 Marine Science

1781 Science Technology/Engineering
1782 Origins of Science

1793 Life and Physical Sciences Lab Assistant
1796 Life and Physical Sciences—Independent Study
1799 Life and Physical Sciences—Other

18: Marketing

1801 Marketing Career Exploration
1802 Marketing—General
1803 Marketing—Fashion
1804 Marketing—Real Estate
1805 Marketing—Transportation
1806 Marketing—Other Specialization

1813 Warehouse Operations
1814 Retail Marketing
1815 Cashier/Checker Operations

1823 Principles of Marketing
1824 Principles of Advertising
1825 Principles of Selling
1826 Marketing Management

1896 Marketing—Independent Study
1897 Marketing—OJT
1898 Marketing—Co-op
1899 Marketing—Other

19: Mass Communication

1902 Journalism

1911 Mass Media—Production

1921 Mass Media—Communication

1931 Photojournalism

1996 Mass Communication—Independent Study
1999 Mass Communication—Other

20: Mathematics

2001 NCTM Core Math
2002 Interactive Math Project
2003 Integrated Math
2004 Informal Math—Integrated Approach

2011 Resource Center Math
2012 Basic Math

2013 General Math
2014 Consumer Math—General Math level
2015 Applied Math—General Focus
2016 Applied Math—Occupational Focus

2021 Pre-Algebra
2022 Principles of Algebra and Geometry
2023 Informal Geometry
2024 Applied Math—CORD

2031 Algebra I
2032 Algebra I—Part 1
2033 Algebra I—Part 2
2034 Geometry
2035 Pre-Algebra II

2041 Algebra II
2042 Algebra III
2043 Trigonometry
2044 Algebra II/Trigonometry
2045 Elementary Functions
2046 Analytic Geometry
2047 Math Analysis
2048 Trigonometry/Analytic Geometry
2049 Trigonometry/Math Analysis

2050 Analytic Geometry/Math Analysis
2051 IB Mathematical Studies
2052 IB Mathematics
2053 Pre-Calculus
2054 Discrete Mathematics
2055 Calculus
2056 Multivariate Calculus
2057 Differential Calculus
2058 AP Calculus AB
2059 AP Calculus BC

2061 Probability and Statistics—General Math level
2062 Probability and Statistics—Algebra I level
2063 Probability and Statistics—Algebra II level
2064 Business Math—General Math level
2065 Business Math—Algebra I level
2066 Business Math—Algebra II level
2067 Business Math—Pre-Calculus level

2068 Computer Math—Algebra I level
2069 Computer Math—Algebra II level

2070 Computer Math—Pre-Calculus level
2071 IB Mathematics and Computing—SL
2072 History of Math—Algebra II level
2073 Number Theory—Algebra II level
2074 Abstract Algebra—Pre-Calculus level
2075 Linear Algebra—Pre-Calculus level
2076 Linear Programming—Pre-Calculus level

2096 Mathematics—Independent Study
2099 Mathematics—Other

21: Military Science

2111 Introduction to ROTC
2112 Military ROTC

2121 ROTC Drill

2195 Military Science—Related Subjects
2199 Military Science—Other

22: Multi/Interdisciplinary Studies

2201 Humanities Survey
2202 Humanities
2203 Issues of Western Humanities

2211 IB Theory of Knowledge

2221 Team-Taught Block
2222 Thematic Integration
2223 Issues of American Culture
2224 Travel Program

2299 Multi/Interdisciplinary Studies—Other

23: Physical Education

2301 Physical Education
2302 Physical Education/Health
2303 Physical Education/Drivers' Education

2311 Team Sports
2312 Individual/Dual Sports
2313 Recreation Sports
2314 Fitness/Conditioning Activities
2315 Corps Movement
2316 Adapted Physical Education

2321 Gymnastics
2322 Weight Training
2323 Swimming
2324 Tennis
2325 Specific Sports Activities

2331 Physical Education Equivalent
2332 Off-Campus Sports

2341 Lifetime Fitness Education

2351 Sports Physiology

2399 Physical Education—Other

24: Precision Metalwork

2403 Machining
2404 Particular Topics in Machining

2412 Metalworking
2413 Sheet Metal
2414 Welding
2415 Particular Topics in Welding

2495 Precision Metalwork—Related Subjects
2496 Precision Metalwork—Independent Study
2497 Precision Metalwork—OJT
2498 Precision Metalwork—Co-op
2499 Precision Metalwork—Other

25: Public, Protective, and Social Services

2501 Exploration of Public Service Careers
2503 Community Protection
2504 Public Administration

2513 Criminal Justice Assisting

2523 Fire Fighting

2533 Teacher Assisting
2534 Educational Methodology

2543 Civil Engineering

2595 Public, Protective, and Social Services—Related Subjects
2596 Public, Protective, and Social Services—Independent Study
2597 Public, Protective, and Social Services—OJT
2598 Public, Protective, and Social Services—Co-op
2599 Public, Protective, and Social Services—Other

26: Religious Education and Theology

2601 Religious Foundations
2605 Comparative Religion
2606 Eastern Religions
2607 Western Religions

2611 Scriptures
2612 Bible History
2615 Christology

2621 Liturgy and Prayer

2631 Ethics and Morality
2632 Justice, Peace, and Faith
2635 Christian Lifestyle

2641 Ministry
2642 Ministry—Other

2695 Religious Education and Theology—Related Subjects
2696 Religious Education and Theology—Independent Study
2699 Religious Education and Theology—Other

27: Social Sciences and History

2701 World Geography
2702 Topics in Geography
2703 IB Geography

2704 World History—Overview
2705 World History—Laboratory
2706 World History and Geography
2707 Modern World History
2708 IB History
2709 Modern European History

2710 AP European History
2711 Ancient Civilizations
2712 Medieval European History
2713 Ancient and Medieval History
2714 World Area Studies

2721 U.S. History—Comprehensive
2722 U.S. History—Laboratory
2723 Early U.S. History
2724 Modern U.S. History
2725 AP U.S. History
2726 State-Specific Studies
2727 U.S. Ethnic/Gender Studies
2729 U.S. History—Other

2730 U.S. Government—Comprehensive
2731 U.S. Government—Laboratory
2732 Topics in U.S. Government
2733 Political Science
2734 Comparative Government
2735 International Relations
2736 AP U.S. Government and Politics
2737 AP Comparative Government and Politics
2738 AP Government
2739 Principles of Democracy

2740 Government and Politics—Other
2741 Economics
2742 Comparative Economics
2743 AP Microeconomics
2744 AP Macroeconomics
2745 AP Economics
2746 IB Economics

2751 Contemporary U.S. Issues
2752 Contemporary World Issues
2753 Western Civilization

2761 Law Studies
2762 Consumer Law
2763 Business Law
2764 Legal System

2770 Social Science
2771 Psychology
2772 Topics in Psychology
2773 AP Psychology
2774 IB Psychology
2775 Sociology
2776 Topics in Sociology
2777 Anthropology
2778 Topics in Anthropology
2779 IB Social Anthropology

2780 Philosophy
2781 Topics in Philosophy
2782 Modern Intellectual History
2783 IB Philosophy
2785 IB Organization Studies
2786 Social Science Research

2796 Social Sciences and History—Independent Study
2799 Social Sciences and History—Other

28: Special/Exceptional Education

2802 Special Resources
2803 Community Living
2804 Mobility Instruction
2805 Communication Instruction
2806 Social Development Instruction
2807 Transition

2899 Special/Exceptional Education—Other

29: Vocational Home Economics

2901 Home Economics Career Exploration

2912 Food Service
2913 Food Service and Nutrition

2923 Child Care
2924 Elder Care

2932 Clothing/Textiles
2933 Home Furnishings Production

2942 Hospitality—General
2943 Hospitality—Food Service emphasis
2944 Hospitality—Hotel/Motel emphasis
2945 Travel/Tourism

2952 Institutional Maintenance

2995 Vocational Home Economics—Related Subjects
2997 Vocational Home Economics—OJT
2998 Vocational Home Economics—Co-op
2999 Vocational Home Economics—Other

A

2074 Abstract Algebra—Pre-Calculus level
0207 Accounting
2316 Adapted Physical Education
1032 Advanced Reading
1241 African languages
0107 Agricultural Management
0124 Agricultural Processing
0106 Agricultural Production
0103 Agriculture Mechanics/Equipment/ Structures
0198 Agriculture—Co-op
0102 Agriculture—Comprehensive
0197 Agriculture—OJT
0199 Agriculture—Other
0195 Agriculture—Related Subjects
0431 Air Conditioning
0435 Air Conditioning/Heating/ Refrigeration
0434 Air Conditioning/Refrigeration
0923 Aircraft Airframe
0922 Aircraft Power Plant
2031 Algebra I
2041 Algebra II
2044 Algebra II/Trigonometry
2042 Algebra III
2032 Algebra I—Part 1
2033 Algebra I—Part 2
1503 Allied Health Occupations
1041 American Literature/History
2046 Analytic Geometry
2050 Analytic Geometry/Math Analysis
1713 Anatomy and Physiology
2713 Ancient and Medieval History
2711 Ancient Civilizations
0123 Animal Processing
0104 Animal Production/Science
2777 Anthropology
1153 AP Art—History of Art
1715 AP Biology
2058 AP Calculus AB
2059 AP Calculus BC
1725 AP Chemistry
2737 AP Comparative Government and Politics
0327 AP Computer Science
2745 AP Economics
1012 AP English Language and Composition
1013 AP English Literature and Composition
2710 AP European History
1206 AP French Language
1207 AP French Literature
1211 AP German Language
2738 AP Government
1216 AP Latin (Vergil, Catullus and Horace)
2744 AP Macroeconomics
2743 AP Microeconomics
1142 AP Music Theory
1735 AP Physics B
1736 AP Physics C
2773 AP Psychology
1202 AP Spanish Language
1203 AP Spanish Literature
1182 AP Studio Art—General Portfolio
1183 AP Studio Art—Drawing Portfolio
2736 AP U.S. Government and Politics
2725 AP U.S. History
1633 Appliance Repair
1743 Applied Biology/Chemistry—CORD
1072 Applied Communications—AIT
2015 Applied Math—General Focus
2016 Applied Math—Occupational Focus
2024 Applied Math—CORD
1151 Art Appreciation
1152 Art History
1181 Art Portfolio
1031 Assisted Reading
1761 Astronomy
0942 Automotive Body Repair and Refinishing—General
0933 Automotive Detailing and Reconditioning
0912 Automotive Mechanics —Comprehensive

0914 Automotive Service
0953 Aviation

B

0225 Banking and Finance
0604 Barbering
0954 Barge and Boat Operation
0324 BASIC Programming
0301 Basic Computer
2012 Basic Math
2612 Bible History
1712 Biology—Advanced Studies
1711 Biology—First Year
1714 Biology—Specific Topics
0712 Blueprint Reading—General
0713 Blueprint Reading—Related
0944 Boat Repair/Refinishing
0473 Building Maintenance
0303 Business Computer Applications
2763 Business Law
0223 Business Management
2064 Business Math—General Math level
2065 Business Math—Algebra I level
2066 Business Math—Algebra II level
2067 Business Math—Pre-Calculus level
0313 Business Programming
1071 Business/Applied English
0201 Business/Office Career Exploration
0298 Business—Co-op
0296 Business—Independent Study
0297 Business—OJT
0299 Business—Other

C

0418 Cabinetmaking
0707 CAD Design and Software
2055 Calculus
1222 Cantonese
1603 Career Exploration
0414 Carpentry
1815 Cashier/Checker Operations
1519 Central Service Technology
1164 Ceramics/Pottery
1722 Chemistry in the Community
1723 Chemistry—Advanced Studies
1721 Chemistry—First Year
1724 Chemistry—Specific Topics
2923 Child Care
0505 Child Development/Parenting
1130 Chorus
2635 Christian Lifestyle
2615 Christology
2543 Civil Engineering
0506 Clothing/Sewing
2932 Clothing/Textiles
1608 Co-op—Non-specified Program
1323 Commercial Art
1333 Commercial Photography
1300 Communication Exploration
2805 Communication Instruction
1403 Community Health
2803 Community Living
2503 Community Protection
0851 Community Service
2742 Comparative Economics
2734 Comparative Government
2605 Comparative Religion
1011 Composition
0398 Computer and Information Sciences —Co-op
0396 Computer and Information Sciences —Independent Study
0397 Computer and Information Sciences —OJT
0399 Computer and Information Sciences —Other
0395 Computer and Information Sciences —Related Subjects
0315 Computer Graphics
2068 Computer Math—Algebra I level
2069 Computer Math—Algebra II level
2070 Computer Math—Pre-Calculus level
0326 Computer Programming—Other Language

0323 Computer Science/ Programming
0317 Computer Technology
1175 Computer-Assisted Art
0316 Computing Systems
1122 Concert Band
1121 Concert/Marching Band
0401 Construction Careers Exploration
0402 Construction
0498 Construction Trades—Co-op
0497 Construction Trades—OJT
0499 Construction Trades—Other
0495 Construction Trades—Related Subjects
0526 Consumer and Homemaking Education—Integrated
0599 Consumer and Homemaking Education—Other
0517 Consumer Economics/Personal Finance
0502 Consumer Home Economics—General
2762 Consumer Law
2014 Consumer Math—General Math level
1125 Contemporary Band
2751 Contemporary U.S. Issues
2752 Contemporary World Issues
2315 Corps Movement
0698 Cosmetology—Co-op
0607 Cosmetology—Facial Specialization
0603 Cosmetology—Licensing
0606 Cosmetology—Nail Specialization
0605 Cosmetology—Non-licensing
0697 Cosmetology—OJT
0699 Cosmetology—Other
0695 Cosmetology—Related Subjects
1167 Crafts
1161 Creative Art—Comprehensive
1162 Creative Art—Drawing/Painting
1163 Creative Art—Sculpture
1021 Creative Writing
2513 Criminal Justice Assisting

D

1105 Dance Appreciation
1102 Dance Repertory
1101 Dance Technique
1106 Dance—Independent Study
1109 Dance—Other
0314 Data Systems/Processing
1523 Dental Assisting
1524 Dental Laboratory Technology
0915 Diesel Mechanics—General
2057 Differential Calculus
1115 Directing
2054 Discrete Mathematics
1605 Diversified Occupations
0701 Drafting Careers Exploration
0703 Drafting—Architectural
0704 Drafting—Civil/Structural
0798 Drafting—Co-op
0705 Drafting—Electrical/Electronic
0702 Drafting—General
0796 Drafting—Independent Study
0797 Drafting—OJT
0799 Drafting—Other
0795 Drafting—Related Subjects
0706 Drafting—Technical/Mechanical
1112 Drama/Stagecraft—Comprehensive
1118 Drama/Stagecraft—Independent Study
1119 Drama/Stagecraft—Other
1113 Drama—Acting/Performance
1114 Drama—Stagecraft
1412 Drivers' Education—Classroom and Laboratory
1411 Drivers' Education—Classroom only
0811 Dropout Prevention Program

E

2723 Early U.S. History
1701 Earth Science
2606 Eastern Religions
2741 Economics
2534 Educational Methodology
1516 EKG Technology
2924 Elder Care
0899 Elective Activities—Other

0462 Electricity/Electronics—General
0494 Electricity/Electronics—Related Subjects
0442 Electricity—Comprehensive
0452 Electronics—General
2045 Elementary Functions
1517 Emergency Medical Technology
1626 Emergent Technologies
1604 Employability Skills
0963 Energy/Power
1093 English Aide
1061 English as a Second Language
1096 English Language and Literature —Independent Study
1099 English Language and Literature —Other
1051 English Morphology and Grammar
1007 English/Composition (lower level)
1008 English/Composition (upper level)
1001 English/Language Arts I (9th grade)
1002 English/Language Arts II (10th grade)
1003 English/Language Arts III (11th grade)
1004 English/Language Arts IV (12th grade)
1005 English/Literature (lower level)
1006 English/Literature (upper level)
0224 Entrepreneurship
1751 Environmental Science
1634 Equipment Maintenance and Repair
2631 Ethics and Morality
0852 Executive Internship with Seminar
0853 Executive Internship without Seminar
0441 Exploration of Electricity/ Electronics
2501 Exploration of Public Service Careers
1103 Expressive Movement

F

0515 Family Living
1172 Film/Videotape
1196 Fine and Performing Art—Independent Study
1199 Fine and Performing Art—Other
1195 Fine and Performing Art—Related Subjects
2523 Fire Fighting
2314 Fitness/Conditioning Activities
0503 Food & Nutrition
0504 Food Science
2912 Food Service
2913 Food Service and Nutrition
1296 Foreign Language and Literature —Independent Study
1299 Foreign Language and Literature —Other
1083 Forensics—Debate
1082 Forensics—Inclusive
1084 Forensics—Individual Event
0114 Forestry
0415 Framing Carpentry
1205 French

G

1120 General Band
0302 General Computer Applications
0108 General Horticulture
1611 General Industrial Arts
2013 General Math
Geography: see World Geography or Topics in Geography
1702 Geology
2034 Geometry
1210 German
2740 Government and Politics—Other
1398 Graphic and Printing Communication —Co-op
1397 Graphic and Printing Communication —OJT
1399 Graphic and Printing Communication —Other
1395 Graphic and Printing Communication —Related Subjects
1313 Graphic Arts/Printing
1301 Graphic Communication Exploration

1217 Greek
0824 Guidance Aide
1128 Guitar
2321 Gymnastics

H

1402 Health and Fitness
1407 Health and Life Management
1502 Health Care Occupations
1501 Health Care Occupations Career Exploration
1598 Health Care Sciences—Co-op
1596 Health Care Sciences—Independent Study
1597 Health Care Sciences—OJT
1599 Health Care Sciences—Other
1595 Health Care Sciences—Related Subjects
1401 Health Education
1499 Health Education—Other
1406 Health for Parenting Teens
1413 Health/Drivers' Education
0433 Heating
0436 Heating/Ventilation/Air Conditioning
1218 Hebrew
1117 History and Literature of the Theater
2072 History of Math—Algebra II level
2901 Home Economics Career Exploration
0523 Home Furnishing
2933 Home Furnishings Production
1506 Home Health Care
0524 Home Maintenance
2943 Hospitality—Food Service emphasis
2942 Hospitality—General
2944 Hospitality—Hotel/Motel emphasis
2202 Humanities
2201 Humanities Survey

I

1184 IB Art/Design
1716 IB Biology
1726 IB Chemistry
1263 IB Classical Languages
0328 IB Computing Studies
2746 IB Economics
2703 IB Geography
2708 IB History
1014 IB Language A (English)
1261 IB Language A (non-English)
1262 IB Language B
2051 IB Mathematical Studies
2052 IB Mathematics
2071 IB Mathematics and Computing—SL
1143 IB Music
2785 IB Organization Studies
2783 IB Philosophy
1704 IB Physical Science
1737 IB Physics
2774 IB Psychology
2779 IB Social Anthropology
2211 IB Theory of Knowledge
0896 Independent Research
1129 Individual Technique—Instrumental Music
1132 Individual Technique—Vocal Music
2312 Individual/Dual Sports
0444 Industrial Electricity
1614 Industrial Safety/First Aid
1698 Industrial/Technology Education —Co-op
1696 Industrial/Technology Education —Independent Study
1697 Industrial/Technology Education —OJT
1699 Industrial/Technology Education —Other
1695 Industrial/Technology Education —Related Subjects
2023 Informal Geometry
2004 Informal Math—Integrated Approach
2952 Institutional Maintenance
1126 Instrumental Ensembles
1194 Integrated Fine Arts
2003 Integrated Math

2199 Military Science—Other
2641 Ministry
2642 Ministry—Other
2804 Mobility Instruction
2709 Modern European History
2782 Modern Intellectual History
2724 Modern U.S. History
2707 Modern World History
0917 Motorcycle Mechanics
2299 Multi/Interdisciplinary Studies—Other
2056 Multivariate Calculus
1144 Music History/Appreciation
1141 Music Theory
1146 Music—Independent Study
1149 Music—Other

N

1231 Native American languages
0115 Natural Resources Management
2001 NCTM Core Math
0318 Network Technology
0208 Notetaking
2073 Number Theory—Algebra II level
1504 Nursing
1505 Nursing—LPN

O

2332 Off-Campus Sports
0822 Office Aide
0210 Office Machines
0202 Office Procedures—Comprehensive
0203 Office Services
1607 OJT—Non-specified Program
1124 Orchestra
1782 Origins of Science
0109 Ornamental Horticulture
1228 Other Asian languages
1227 Other East Asian, Southeast Asian, or Pacific Island languages
1214 Other European languages
1251 Other languages

P

0943 Particular Topics in Automotive Body Repair and Refinishing
0913 Particular Topics in Automotive Mechanics
0416 Particular Topics in Carpentry
0916 Particular Topics in Diesel Mechanics
0445 Particular Topics in Electricity
0463 Particular Topics in Electricity/Electronics
0453 Particular Topics in Electronics
0437 Particular Topics in HVACR
2404 Particular Topics in Machining
2415 Particular Topics in Welding
0325 Pascal Programming
0516 Personal Development
2780 Philosophy
1171 Photography
1931 Photojournalism
2301 Physical Education
2331 Physical Education Equivalent
2303 Physical Education/Drivers' Education
2302 Physical Education/Health
2399 Physical Education—Other
1703 Physical Science
1733 Physics—Advanced Studies
1731 Physics—First Year
1734 Physics—Specific Topics
1127 Piano
0105 Plant Production/Science
1116 Playwriting
0438 Plumbing
0439 Plumbing and Heating
2733 Political Science
1212 Portuguese
2021 Pre-Algebra
2035 Pre-Algebra II
2053 Pre-Calculus
2498 Precision Metalwork—Co-op

2496 Precision Metalwork—Independent Study
2497 Precision Metalwork—OJT
2499 Precision Metalwork—Other
2495 Precision Metalwork—Related Subjects
1824 Principles of Advertising
2022 Principles of Algebra and Geometry
2739 Principles of Democracy
1823 Principles of Marketing
1825 Principles of Selling
1732 Principles of Technology
1311 Printing Careers Exploration
1165 Printmaking/Graphics
2062 Probability and Statistics—Algebra I level
2063 Probability and Statistics—Algebra II level
2061 Probability and Statistics—General Math level
1623 Production Systems
2771 Psychology
2504 Public Administration
1081 Public Speaking
2598 Public, Protective, and Social Services —Co-op
2596 Public, Protective, and Social Services —Independent Study
2597 Public, Protective, and Social Services —OJT
2599 Public, Protective, and Social Services —Other
2595 Public, Protective, and Social Services —Related Subjects

R

0206 Recordkeeping
2313 Recreation Sports
0432 Refrigeration
2696 Religious Education and Theology —Independent Study
2699 Religious Education and Theology —Other
2695 Religious Education and Theology —Related Subjects
2601 Religious Foundations
1627 Research and Development
0443 Residential Wiring
2011 Resource Center Math
1814 Retail Marketing
2121 ROTC Drill
1213 Russian

S

1405 Safety and First Aid
0843 School Governance
0842 School Orientation
1781 Science Technology/Engineering
2611 Scriptures
0514 Self Management
0862 Seminar
2413 Sheet Metal
0209 Shorthand
1281 Sign Language
0918 Small Engine Mechanics
2806 Social Development Instruction
2770 Social Science
2786 Social Science Research
2796 Social Sciences and History —Independent Study
2799 Social Sciences and History—Other
2775 Sociology
1201 Spanish
1271 Spanish for Native Spanish Speakers
0525 Special Education Home Maintenance
1404 Special Needs Health Education
2802 Special Resources
2899 Special/Exceptional Education—Other
2325 Specific Sports Activities
2351 Sports Physiology
0801 Standardized Test Preparation
0802 State Test Preparation
2726 State-Specific Studies

0821 Student Aide
0833 Study Hall
0803 Study Skills
1518 Surgical Technology
2323 Swimming

T

1226 Tagalog or other Filipino language
0823 Teacher Aide
2533 Teacher Assisting
2311 Team Sports
2221 Team-Taught Block
1022 Technical Writing
1625 Technology Systems
2324 Tennis
1166 Textiles
2222 Thematic Integration
2778 Topics in Anthropology
2702 Topics in Geography
2781 Topics in Philosophy
2772 Topics in Psychology
2776 Topics in Sociology
2732 Topics in U.S. Government
2807 Transition
0998 Transportation Technology—Co-op
0997 Transportation Technology—OJT
0999 Transportation Technology—Other
0995 Transportation Technology—Related Subjects
2224 Travel Program
2945 Travel/Tourism
2043 Trigonometry
2048 Trigonometry/Analytic Geometry
2049 Trigonometry/Math Analysis
0832 Tutorial
0831 Tutoring Practicum
Typing: see Keyboarding

U

2727 U.S. Ethnic/Gender Studies
2730 U.S. Government—Comprehensive
2731 U.S. Government—Laboratory
2721 U.S. History—Comprehensive
2722 U.S. History—Laboratory
2729 U.S. History—Other
1742 Unified Science
1643 Upholstery

V

0861 Values Clarification
1225 Vietnamese
1533 Vision Care Assisting
1189 Visual Art—Other
1186 Visual Art—Independent Study
1131 Vocal Ensembles
2998 Vocational Home Economics—Co-op
2997 Vocational Home Economics—OJT
2999 Vocational Home Economics—Other
2995 Vocational Home Economics—Related Subjects

W

1813 Warehouse Operations
2322 Weight Training
2414 Welding
2753 Western Civilization
2607 Western Religions
0113 Wildlife Management
0417 Woodworking
0205 Word Processing
1606 Work Experience
2714 World Area Studies
2701 World Geography
2706 World History and Geography
2705 World History—Laboratory
2704 World History—Overview

Appendix B

Participating Education Agencies

Selection and Role of State Participants

Maryland's State Board of Education has adopted guidelines, goals, and subgoals for certain subject areas, but local system boards are responsible for developing courses and selecting instructional material to meet those goals. The state maintains a centralized data collection system, gathering data on a county-by-county basis and providing yearly "report cards" regarding the school districts and schools within each district. The Howard County Public School System, representing Maryland, included a wide variety of academic, vocational, and elective courses as well as those taught at the Howard County School of Technology. Vocational courses within this school were varied, well described, and required concurrent enrollment in academic courses. Shortly before scheduling the site visit to Maryland, project staff added the Montgomery County Public Schools to the list of project participants. Montgomery County also offers a variety of courses with a vocational or technical emphasis within the Edison Career Center and has established mini-businesses in which students can apply their skills. The Montgomery County School District has established an International Baccalaureate program, as well as a magnet program in science, mathematics, and computer science. The addition of Montgomery County enabled project staff to expand the range of courses beyond the usual offerings of traditional high schools nationwide.

Texas personnel sent the course catalog from the Austin Independent School District (ISD) to represent what courses the state offered. The High School Information Guide from Austin ISD contained well-described courses with grade placements and prerequisites for individual courses. Because it was not known in the early stages of the project what pieces of information were likely to be included in the course descriptions and classification system, the Austin ISD was one district that could be used to build a system in which prerequisites played a part. In addition, although the Austin ISD uses its own course codes, the Information Guide also included Texas Education Agency codes, indicating a statewide coding system of courses. Because of these factors, the large student population within Texas, and an assumed development of courses for bilingual and limited English speaking students, Texas became a project participant.

Colorado offered an opportunity to explore a school system in a state in which local authority and autonomy dominates the education system. Initially, based on the materials that came from the Jefferson County School District, staff decided to include Colorado as a project participant. The school course catalog from Jefferson County indicated a wide variety of courses, offered many times on a 9-week basis, and covered fairly specific topics within a discipline. During the course of the project, Greeley Central High School replaced Jefferson County. Weld County School District 6 (where Greeley Central High School is located) is an ExPRESS project participant as well. Colorado's site visit included visits and interviews with members of the Jefferson County School District staff and the principal of Jefferson County Open School (an alternative high school operated within the geographical boundaries of Jefferson County). However, the crosswalks performed using the proposed classification system do not include their curricula. In order to make use of the variety of course offerings within Colorado, project staff also used course offerings from Littleton High School when designing the system. Although staff did not interview personnel at Littleton High School, they did include Littleton's course offerings in the overall classification system crosswalk.

The course descriptions provided by Clark County, Nevada described a general course scope and then presented a list of more detailed course goals, moving toward a list of competencies. The amount of course credit available varied from one-half per semester to two; some stratification of courses seemed evident; and the course descriptions indicated some variety of vocational offerings. Initially, study staff chose Clark County as a base site. Before conducting the site visit in Nevada, however, they added more districts to the participant list and eventually performed crosswalk activities for Clark County, Southern Nevada Vocational Technical Center, and Carson City High School.

In response to the CCSSO request, Florida sent course catalogs from two individual high schools, along with a list of all state-approved courses. The catalogs from the two high schools provided an initial source for course descriptions; eventually, the classification's descriptions and crosswalk activities depended upon the descriptions in numerous volumes of Florida's Curriculum Frameworks. The Course Code Directory and the Curriculum Frameworks provided a comprehensive view of all courses taught in Florida for which the state reimburses local school districts. Because of the wide variety of courses represented, the diverse student population, the detail provided by the Curriculum Frameworks, and Florida's interest in using the ExPRESS system, the state was chosen as a project participant.

Project staff chose South Dakota (represented initially by Sioux Falls School District and later by Todd County School District) and Virginia (first represented by Fairfax County and later by the state agency) to be the test states. From the course catalogs and other information provided, study staff determined that these education systems contained enough variety to strenuously test the flexibility of any proposed model system. This variety was evident from the districts' course offerings, the amount and manner in which schools awarded credit, and the duration of courses. Project staff visited the South Dakota State Department of Education and Cultural Affairs and Todd County School District in South Dakota. In Virginia, they chose the State Board of Education to serve as the contact and test site.

CALIFORNIA

California Department of Education
721 Capitol Mall
Sacrament, CA 95814
contact/coordinator:
James Fulton

COLORADO

Colorado Community College and
Occupational Education System
1391 North Speer Boulevard, Suite 600
Denver, CO 80204-2554
contact/coordinator:
Dale Beckmann

Colorado Department of Education
201 East Colfax
Denver, Co 80203
contact/coordinator:
Jim Hennes

Jefferson County Open School
7655 West 10th Avenue
Lakewood, CO 80215
contact/coordinator:
Ruth Steele

Jefferson County Public Schools
1829 Denver West Drive, Bldg. #27
Golden, CO 80401
contact/coordinator:
Gene Collins

Weld County School District 6
(Greeley Central High School)
811 15th Street
Greeley, CO 80631
contacts/coordinators:
Gary Steward
Dale Zeck

FLORIDA

Florida Department of Education
Florida Education Center
325 West Gaines St.
Tallahassee FL 32399-0400
contact/coordinator:
Levan Dukes

MARYLAND

Howard County Public School System
Divison of Curriculum
10910 Route 108
Ellicott City, MD 21042
contact/coordinator:
Joan Palmer

Maryland State Department of Education
Division of Instruction
200 West Baltimore Street
Baltimore, MD 21201
contact/coordinator:
Nicolas Hobar

Montgomery County Public School
System
Carver Education Services Center
850 Hungerford Drive
Rockville, MD 20850
contact/coordinator:
Mary Helen Smith

NEVADA

Nevada State Department of Education
Division of Planning, Research, and
Evaluation
400 West King Street
Carson City, NV 89710
contact/coordinator:
Denise Quon

SOUTH DAKOTA

South Dakota Department of Education
and Cultural Affairs
Office of Educational Accountability
700 Governors Drive
Pierre, SD 57501-2291
contact/coordinator:
LeRoy B. Fugitt

Todd County School District
South Main Street
Mission, SD 57555-0087
contact/coordinator:
Richard Bordeaux

TEXAS

Austin Independent School District
1111 West 6th Street
Austin, TX 78703-5399
contact/coordinator:
Sherry Fayard

Texas Education Agency
1701 North Congress Avenue
Austin, TX 78701-1494
contact/coordinator:
Karen Cornwell

VIRGINIA

Virginia Department of Education
School Accreditation
James Monroe Building, 24th floor
101 North 14th St.
Richmond, VA 23219
contact/coordinator:
Charles Finley

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